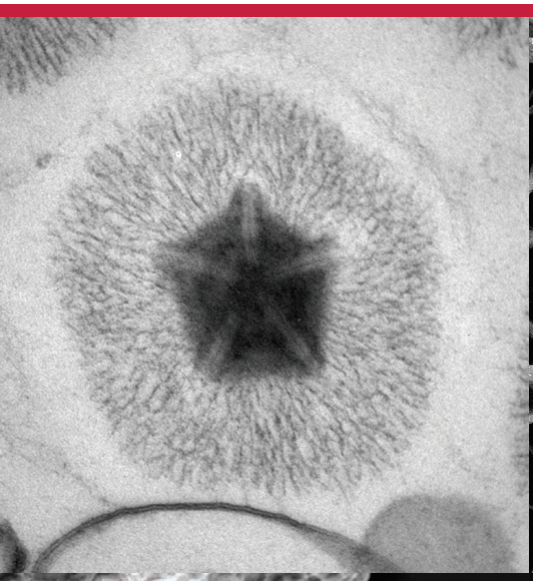
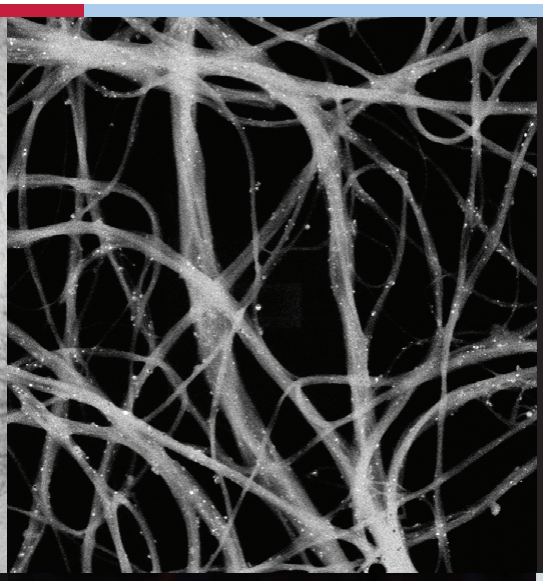
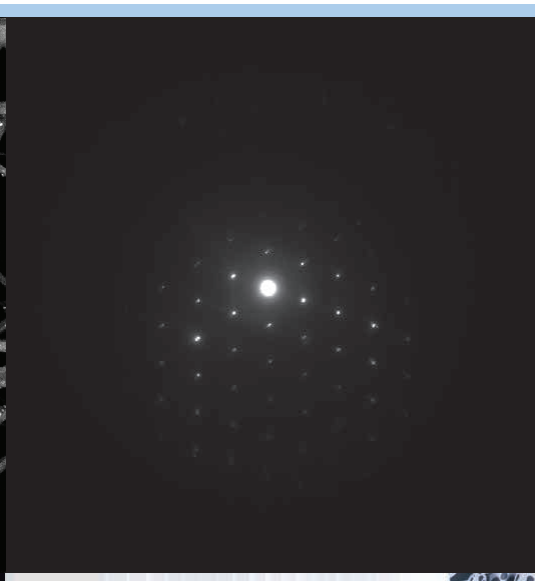
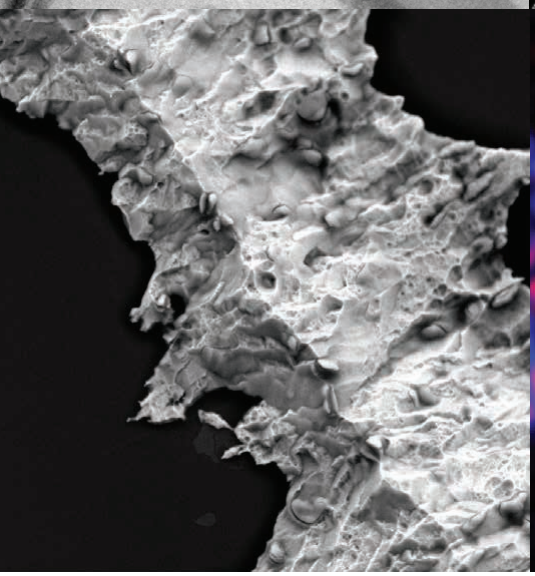
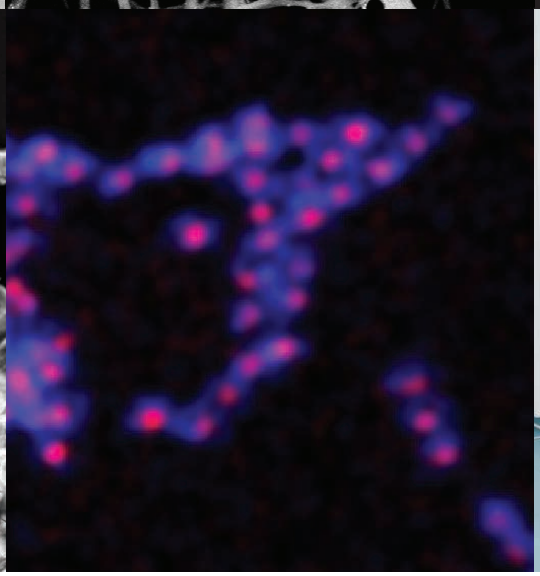
LVEM 25E

Low Voltage Electron Microscopes

Applications Brochure


delong instruments®

... your way to electron microscopy

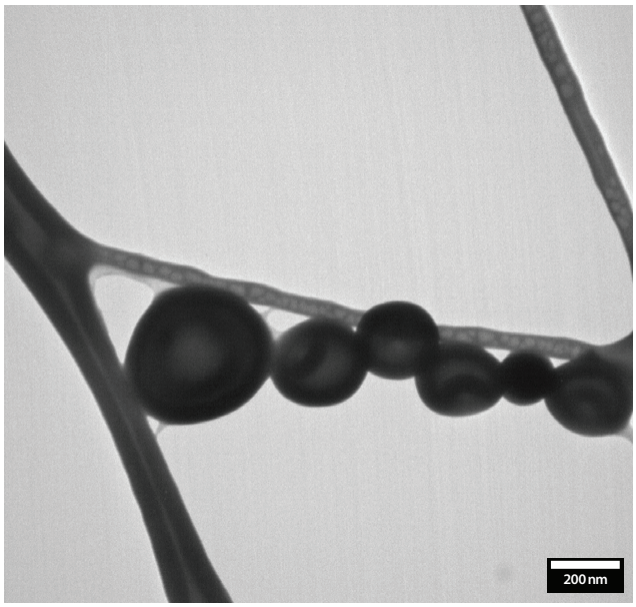
LVEM 25E APPLICATIONS

Material Sciences

- Polymers
- Chemistry
- Nanomaterials
- Combined Materials
- Semiconductors

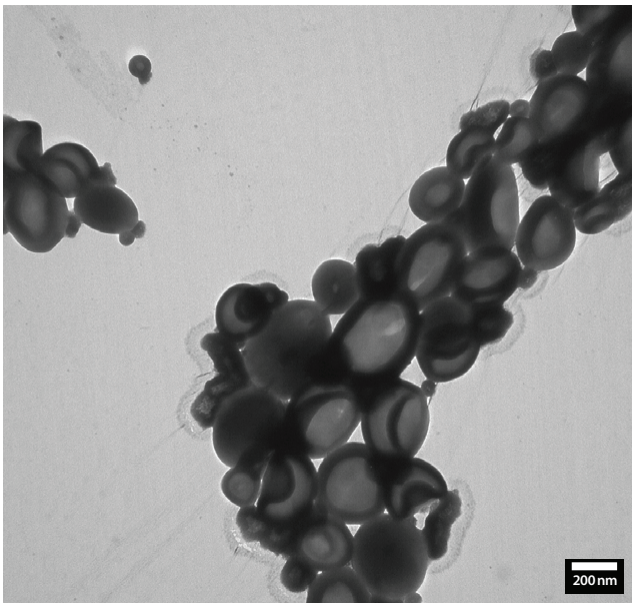
Life Sciences

- Virology
- Bacteriology
- Pathology
- Pharmaceuticals
- Proteins
- Biochemistry
- Biomimetics
- Agriculture
- Biotechnology
- Biology
- Imunology



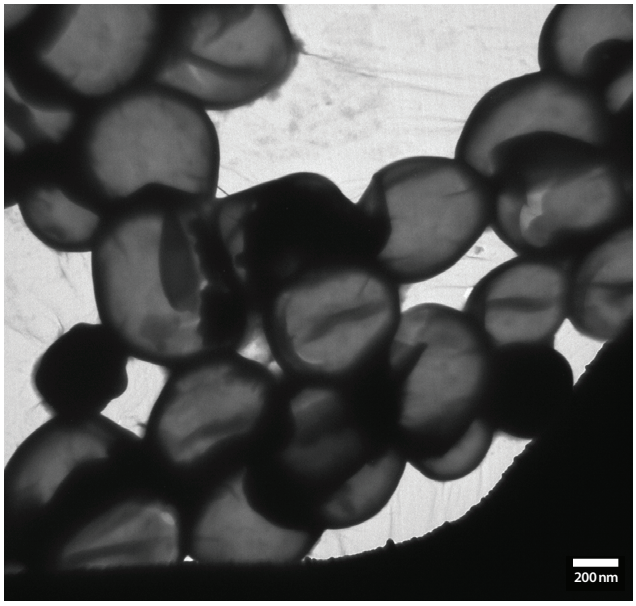
TEM: Polymer Vesicles

Particles on carbon film



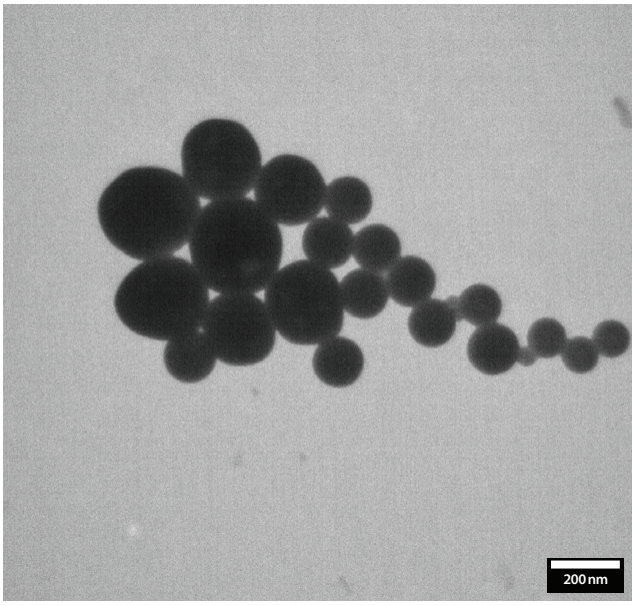
TEM: Polymer Vesicles

Particles on carbon film



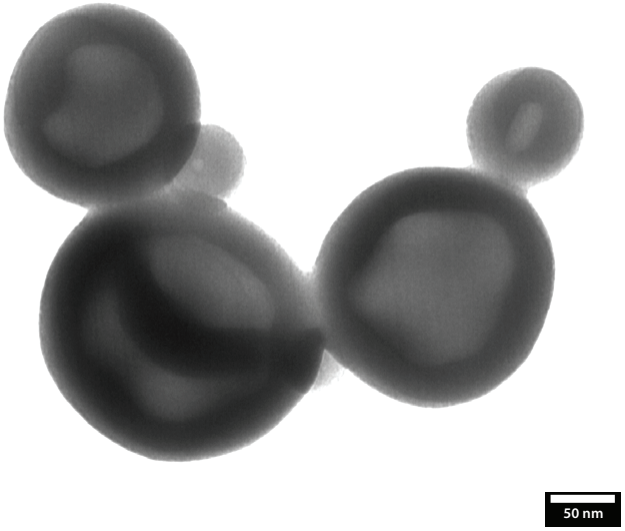
TEM: Polymer Vesicles

Particles on carbon film



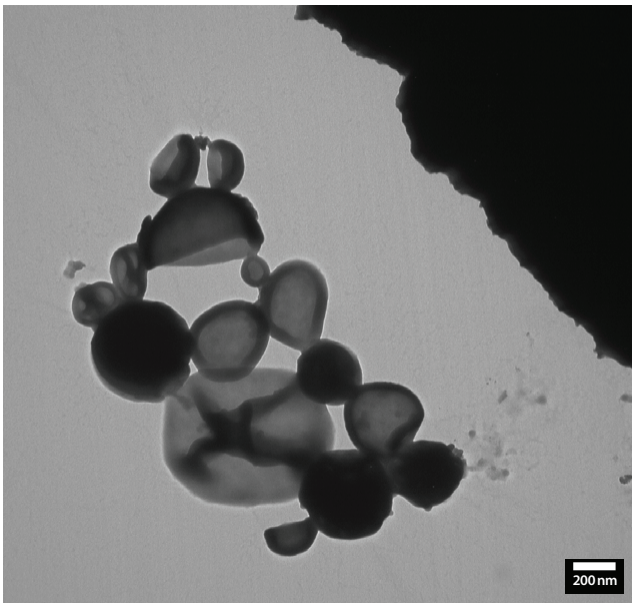
TEM: Polymer Vesicles

Particles on carbon film



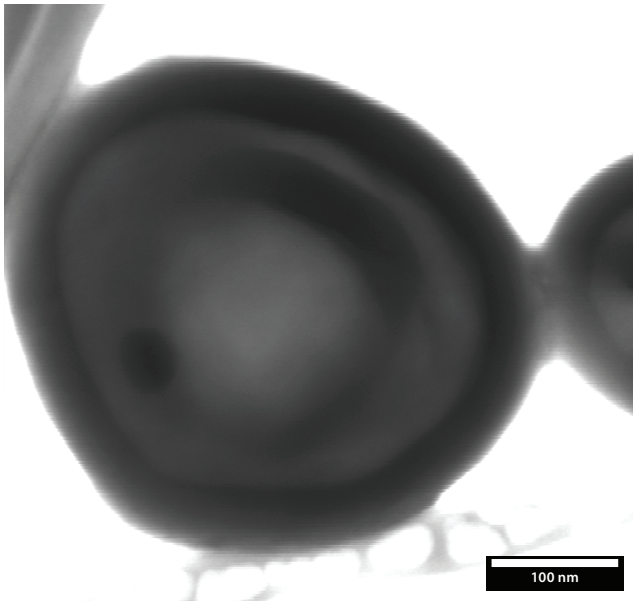
TEM: Polymer Vesicles

Particles on carbon film



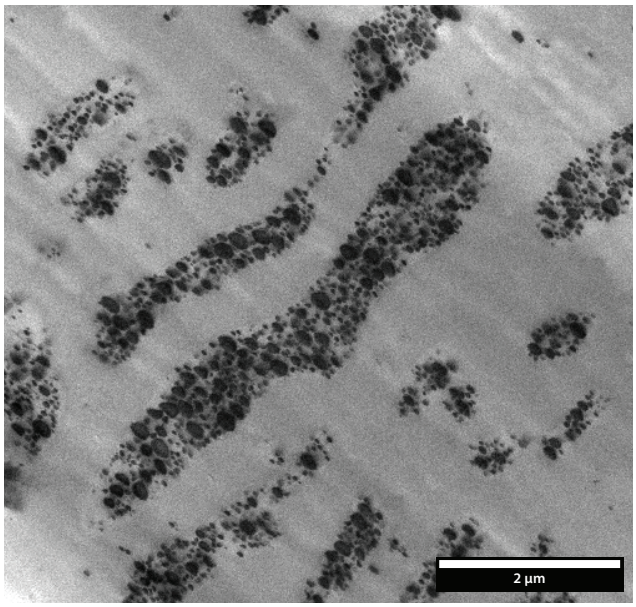
TEM: Polymer Vesicles

Particles on carbon film



TEM: Polymer Spheres

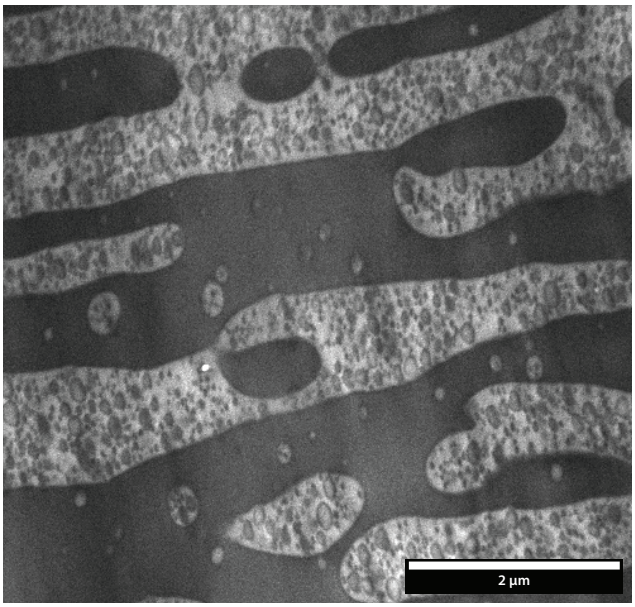
Particles on carbon film



STEM 10 kV: Copolymer

Stained section

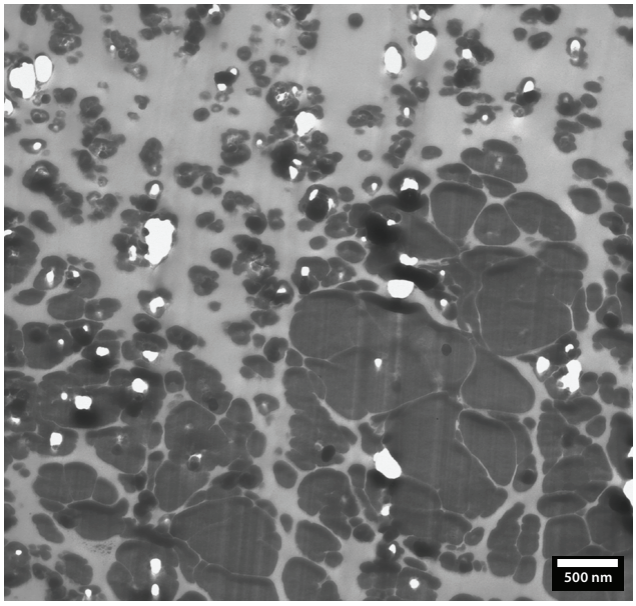
Single stained polymer



STEM 10 kV: Copolymer

Stained section

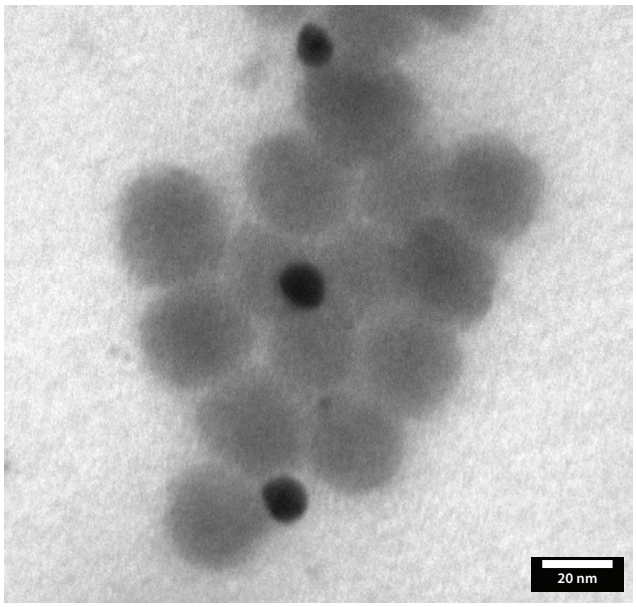
Double stained polymer



TEM: Microtomed Rubber

Unstained section

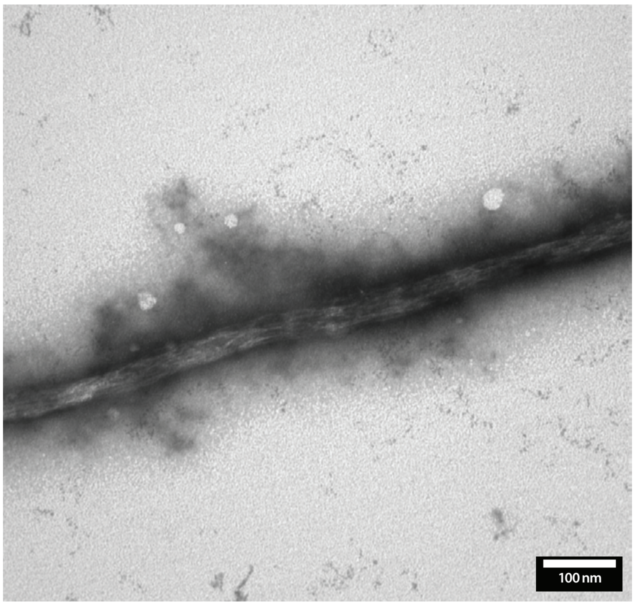
Polymer section



TEM: Molecular Imprinted Polymers

Particles on carbon film

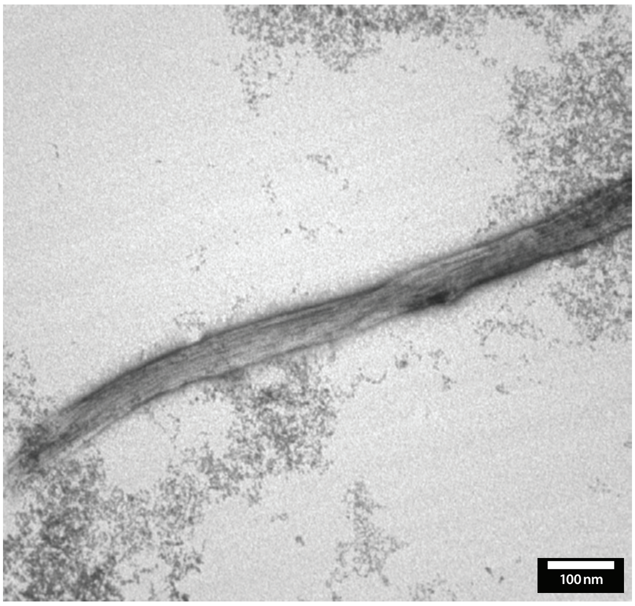
Sample courtesy of Ing. Milada Vodová, Mendelu, Brno



TEM: Cellulose Nanofibers

Particles on carbon film

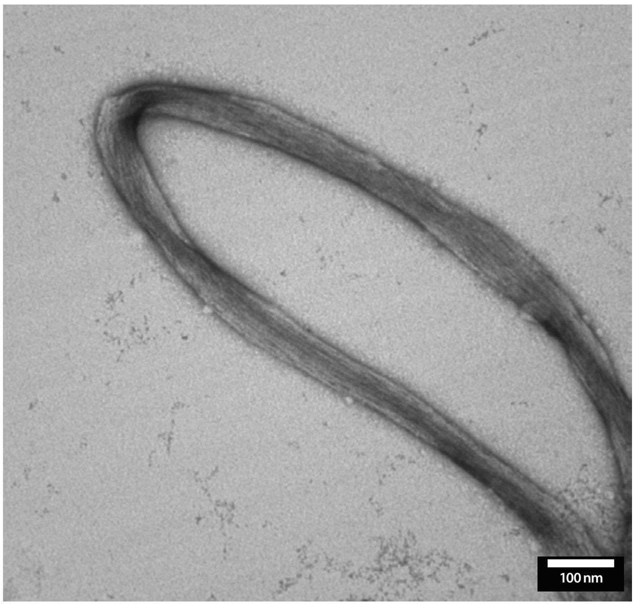
Stained with uranyl acetate



TEM: Cellulose Nanofibers

Particles on carbon film

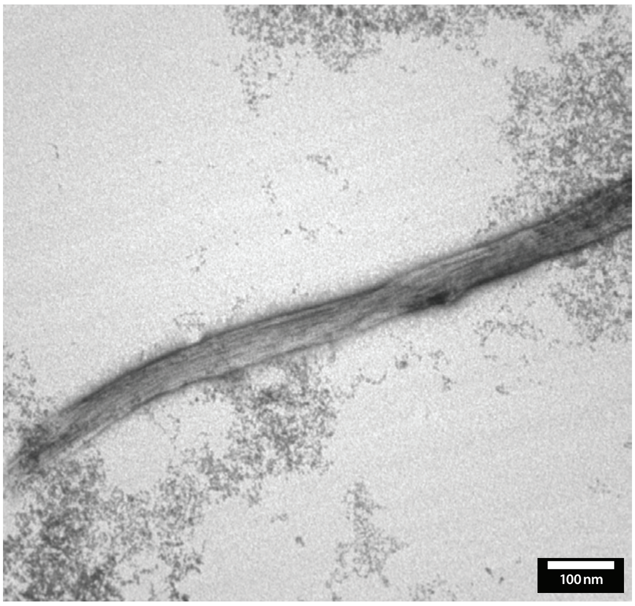
Stained with uranyl acetate



TEM: Cellulose Nanofibers

Particles on carbon film

Stained with uranyl acetate



TEM: Cellulose Nanofibers

Particles on carbon film

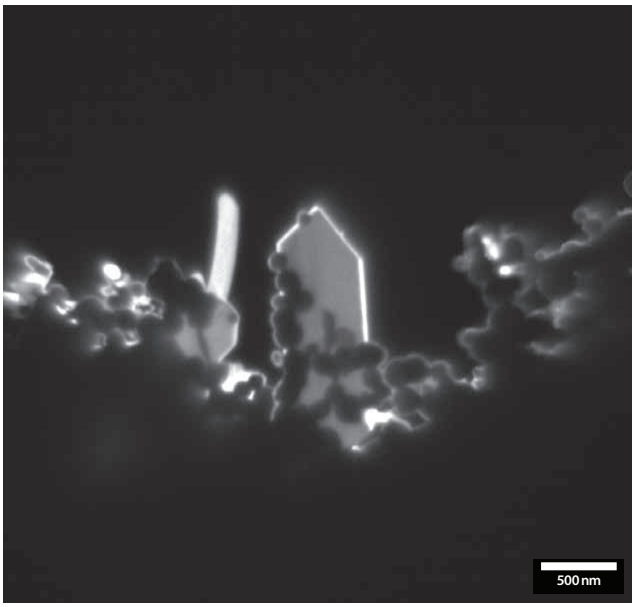
Stained with uranyl acetate

Sample courtesy of Ing. Luca Bertolla, Ph.D., Institute ofPhysics of Materials (IPM)

TEM: Molybden Crystal

Evaporated film

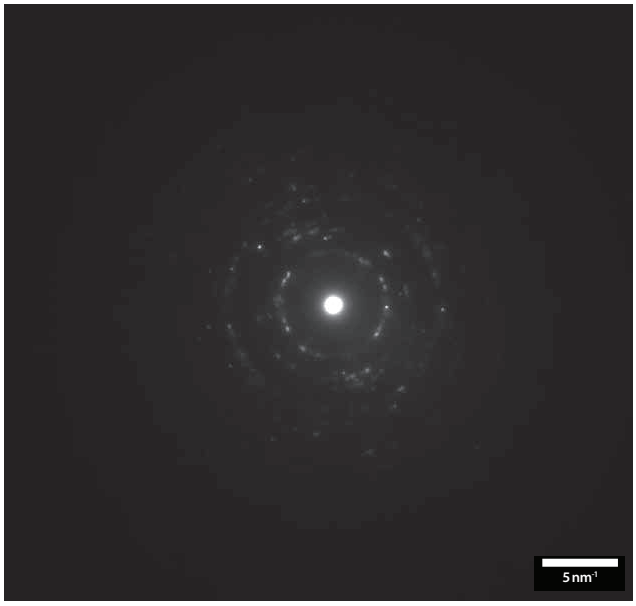
Bright field



TEM: Molybden Crystal

Evaporated film

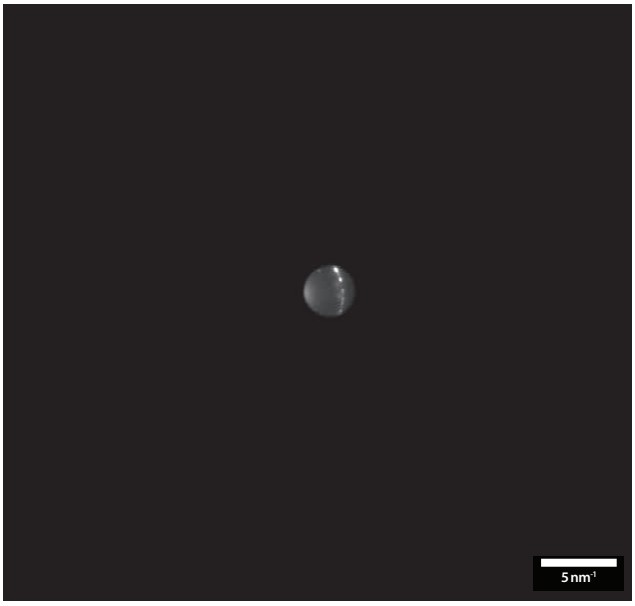
Dark field



ED: Molybden Crystal

Evaporated film

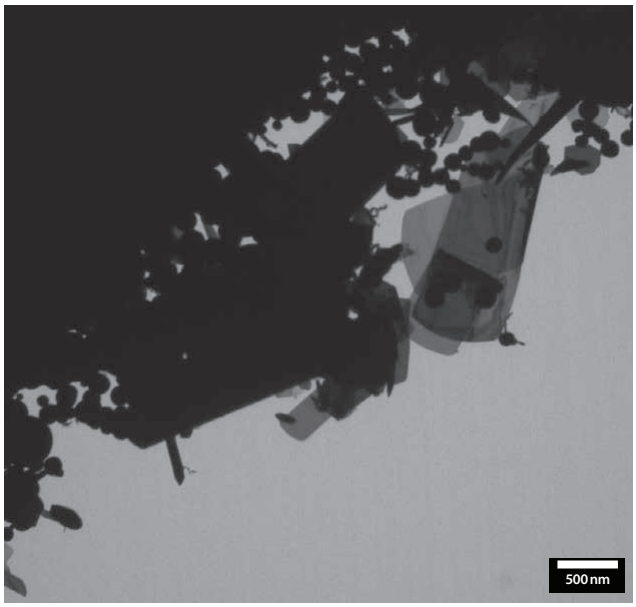
Corresponding diffraction



ED: Molybden Crystal

Evaporated film

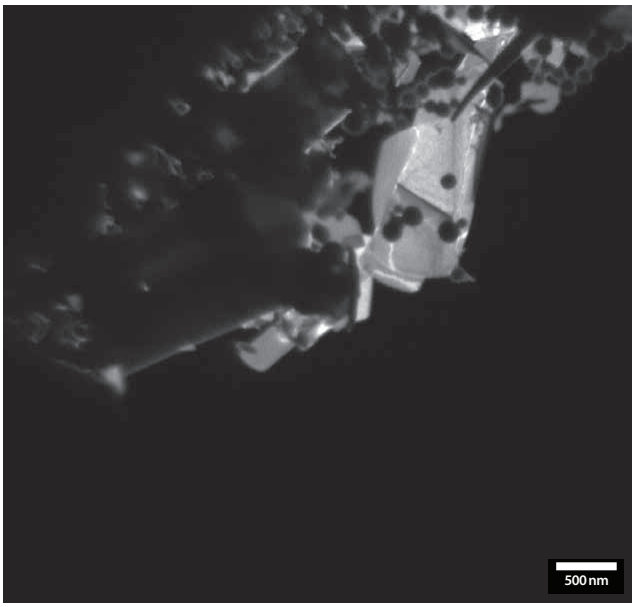
Corresponding diffraction



TEM: Molybden Crystal

Evaporated film

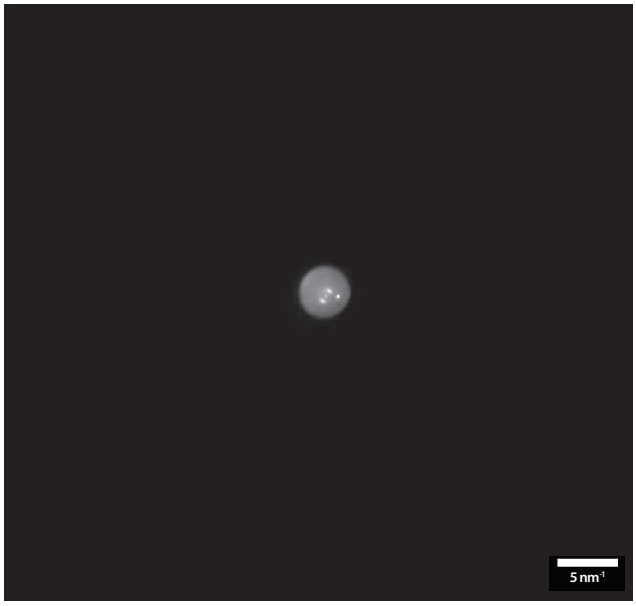
Bright field



TEM: Molybden Crystal

Evaporated film

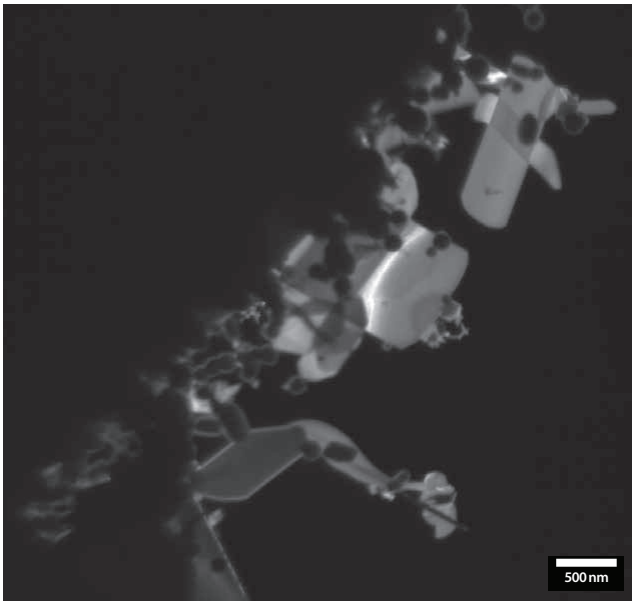
Dark field



ED: Molybden Crystal

Evaporated film

Corresponding diffraction



ED: Molybden Crystal

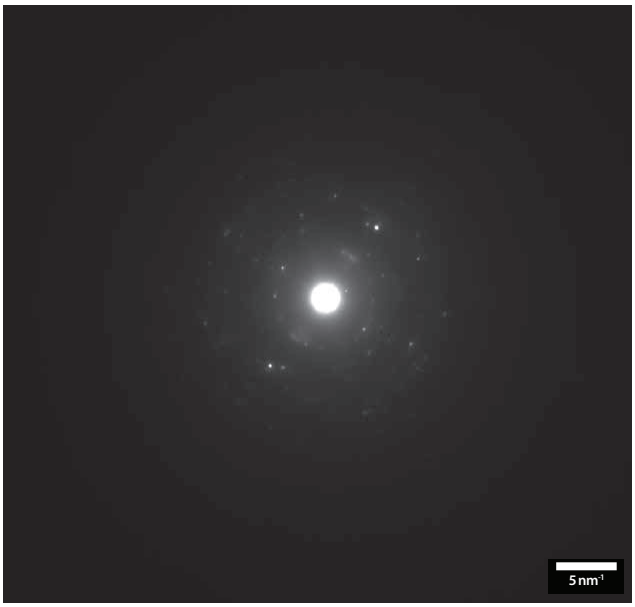
Evaporated film

Corresponding diffraction

TEM: Molybden Crystal

Evaporated film

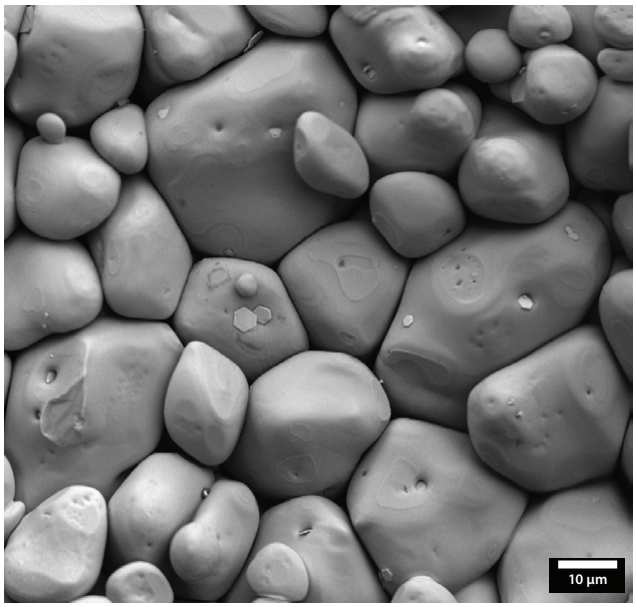
Bright field



ED: Molybden Crystal

Evaporated film

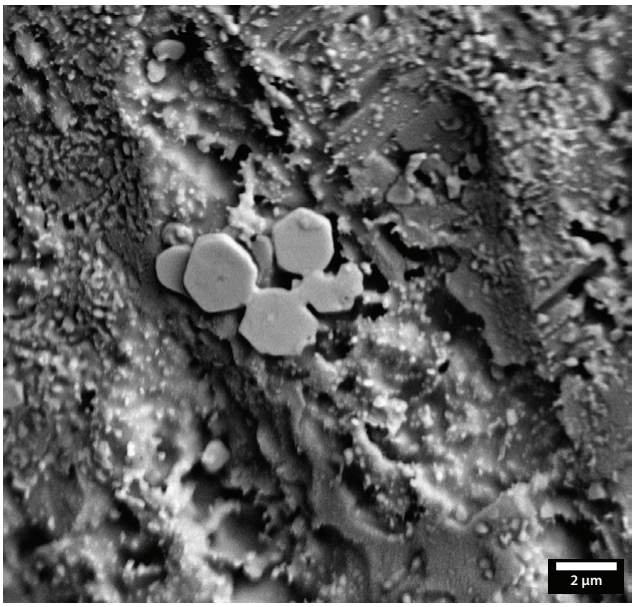
Corresponding diffraction



SEM: Al Crystals

Sample on grid

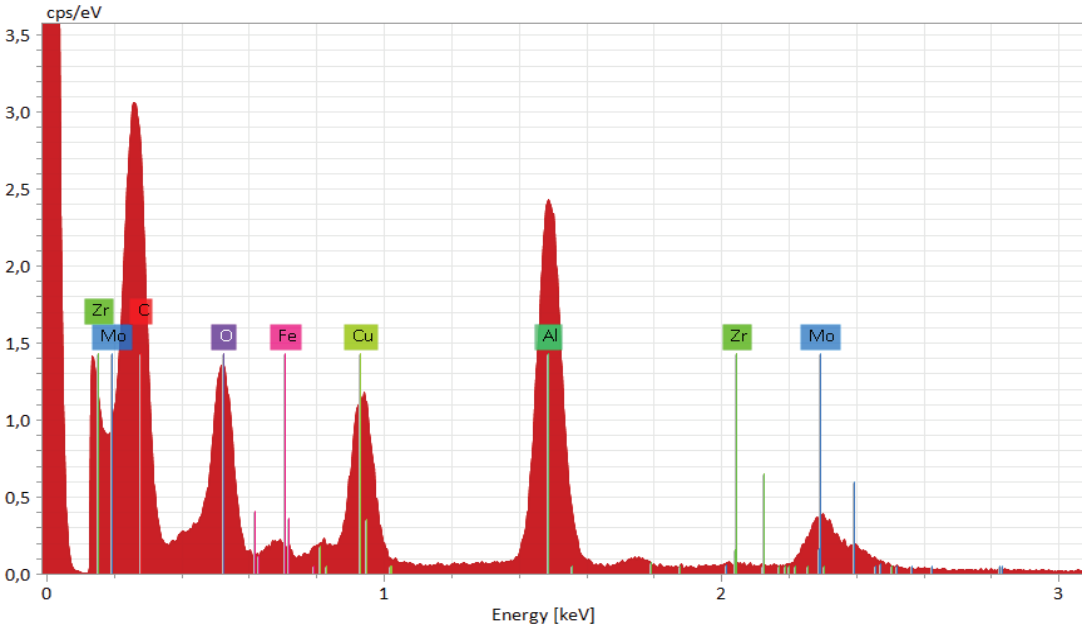
BSE. Bulk material



SEM: Al Crystals

Sample on grid

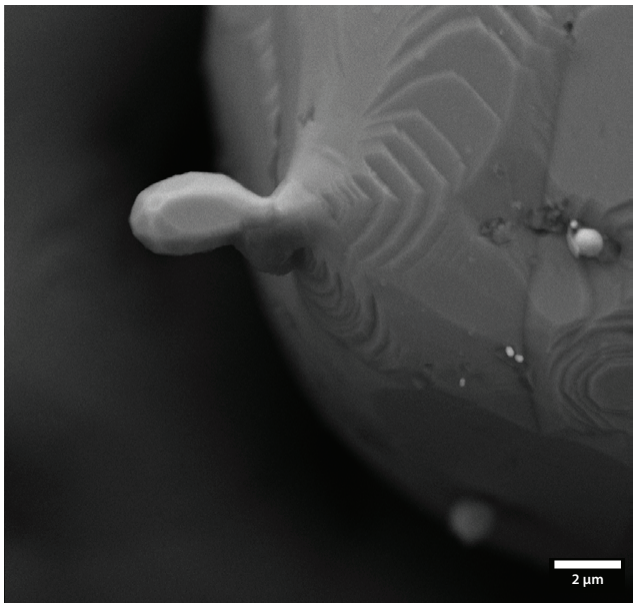
BSE. Bulk material



SEM: Al Crystals

Sample on grid

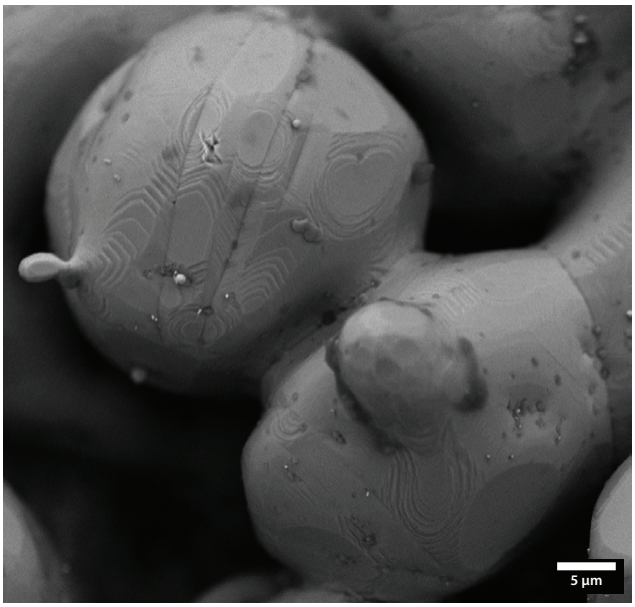
BSE. EDS spectrum



SEM: Cu Annealed

Sample on grid

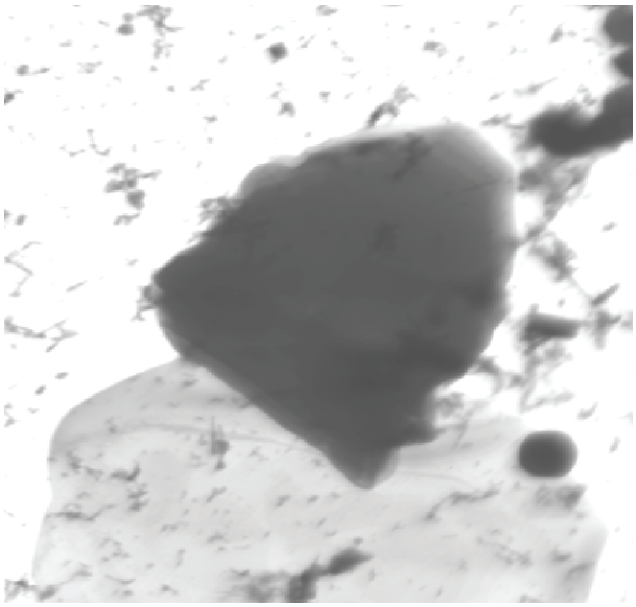
BSE. Bulk material



SEM: Cu Annealed

Sample on grid

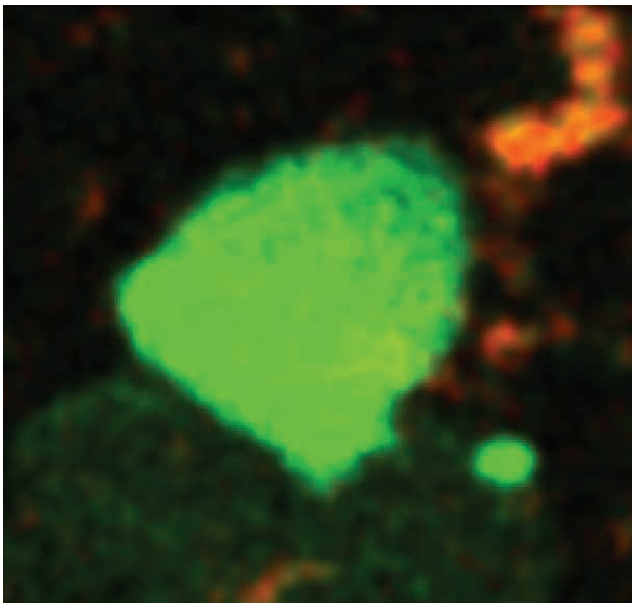
BSE. Bulk material



EDS: W Ta Mo

Particles on carbon

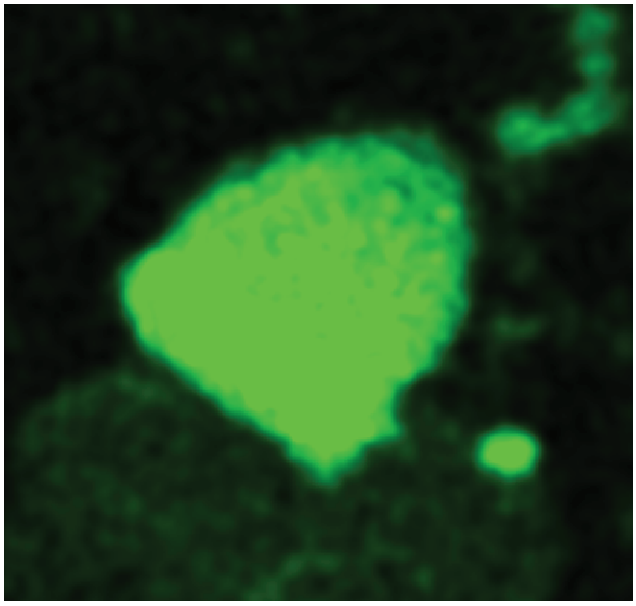
EDS STEM



EDS: W Ta Mo

Particles on carbon

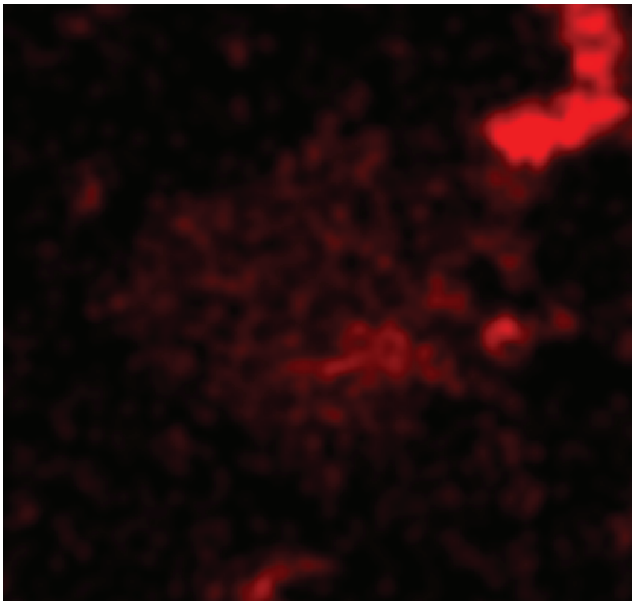
Sample mapping



EDS: W Ta Mo

Particles on carbon

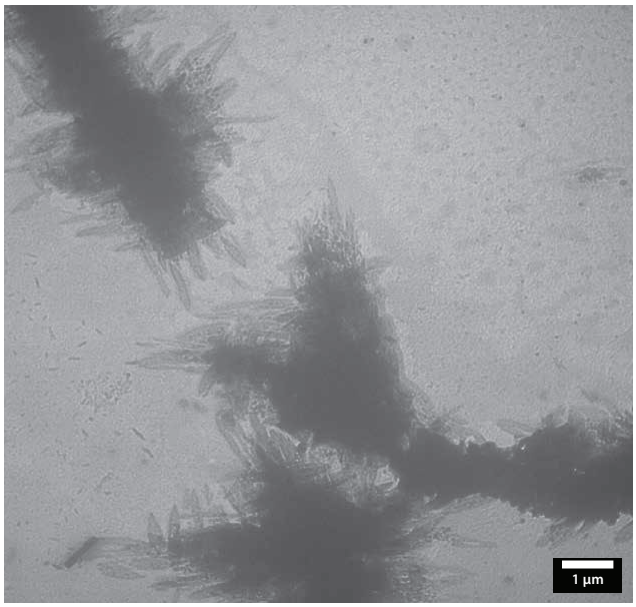
Mo mapping



EDS: W Ta Mo

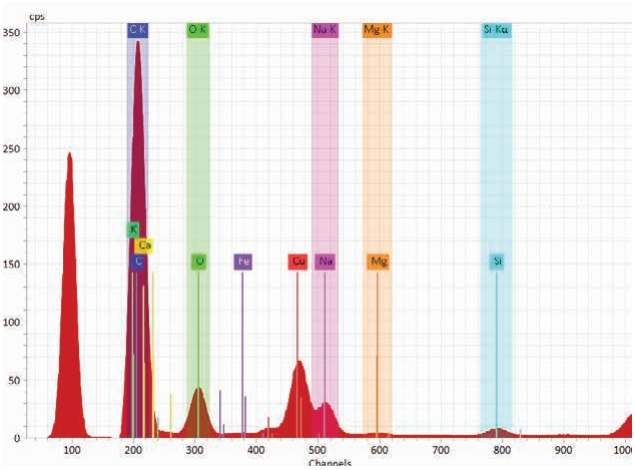
Particles on carbon

W mapping



TEM: Asbestos

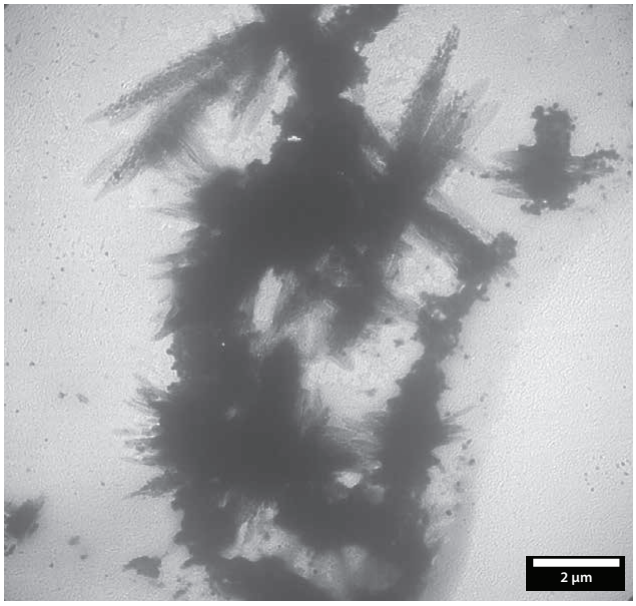
Particles on carbon



EDS: Asbestos

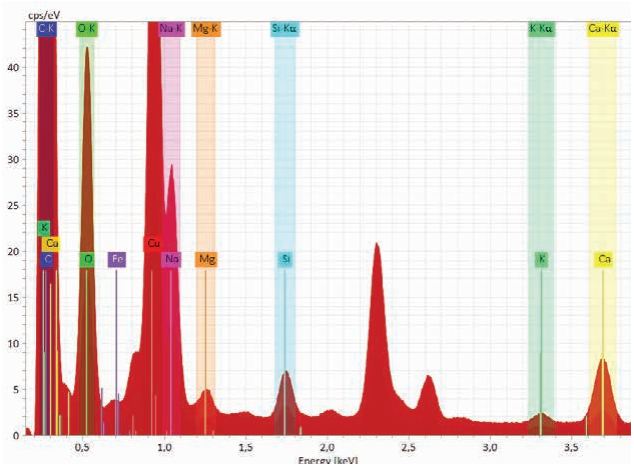
Particles on carbon

EDS spectrum



TEM: Asbestos

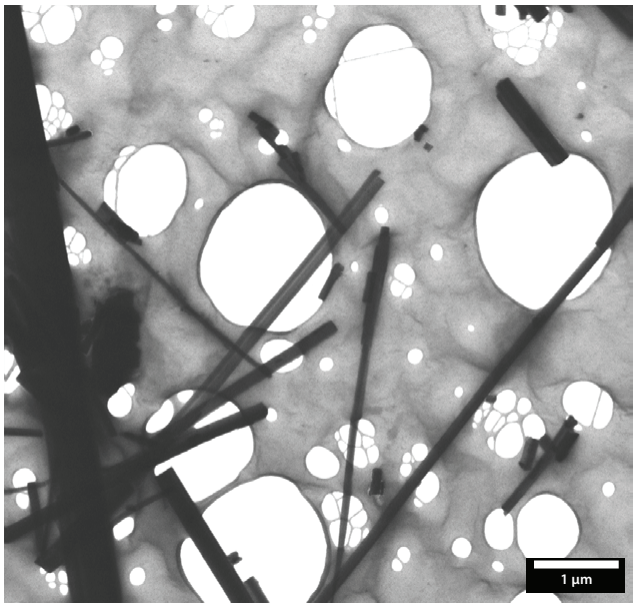
Particles on carbon



EDS: Asbestos

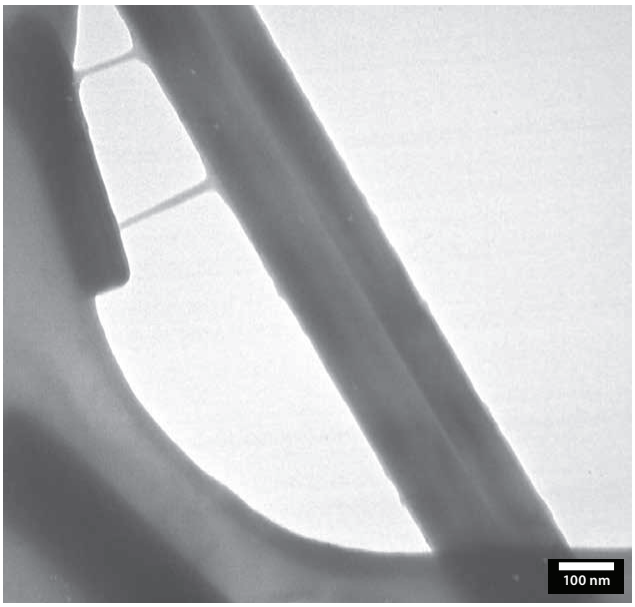
Particles on carbon

EDS spectrum



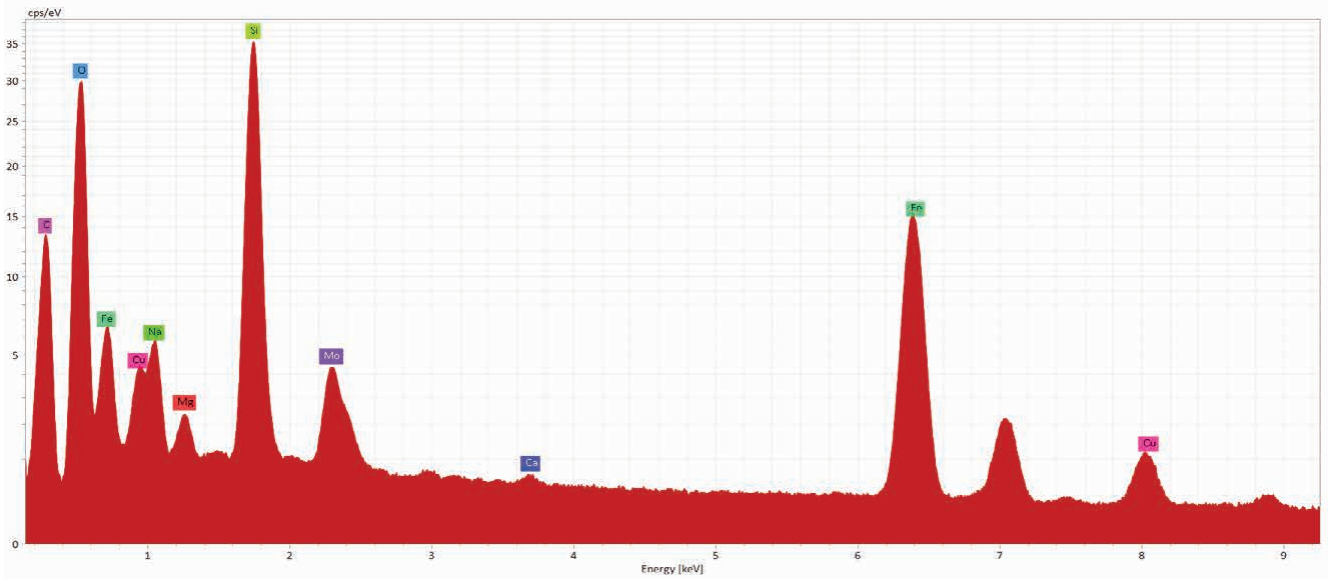
STEM: Asbestos

Particles on carbon



TEM: Asbestos

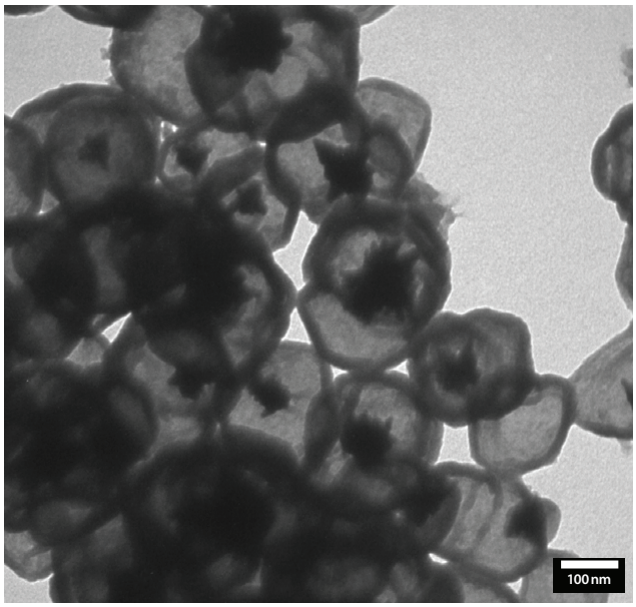
Particles on carbon



EDS: Asbestos

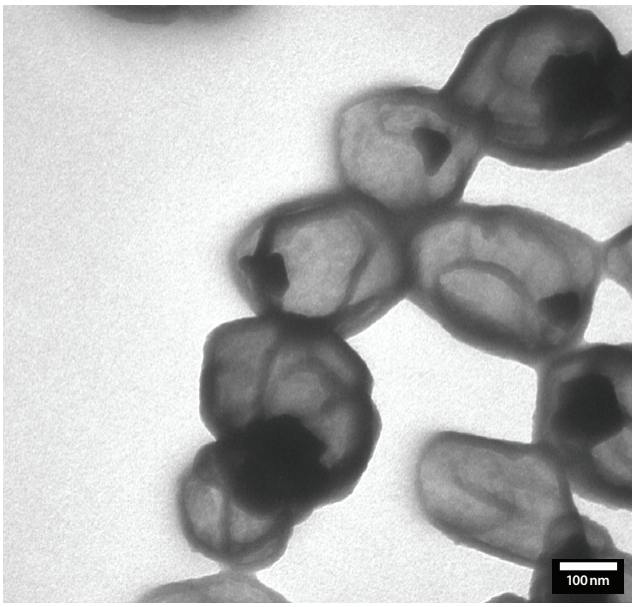
Particles on carbon

EDS spectrum



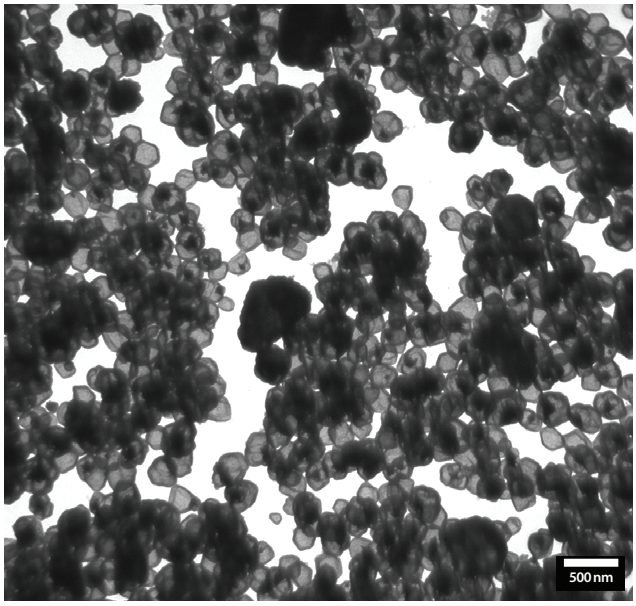
TEM: Covalent Organic Frameworks

Particles on carbon film



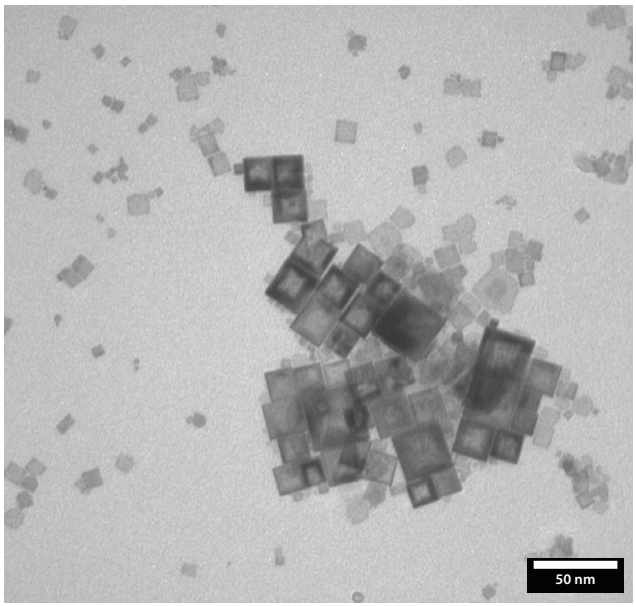
TEM: Covalent Organic Frameworks

Particles on carbon film



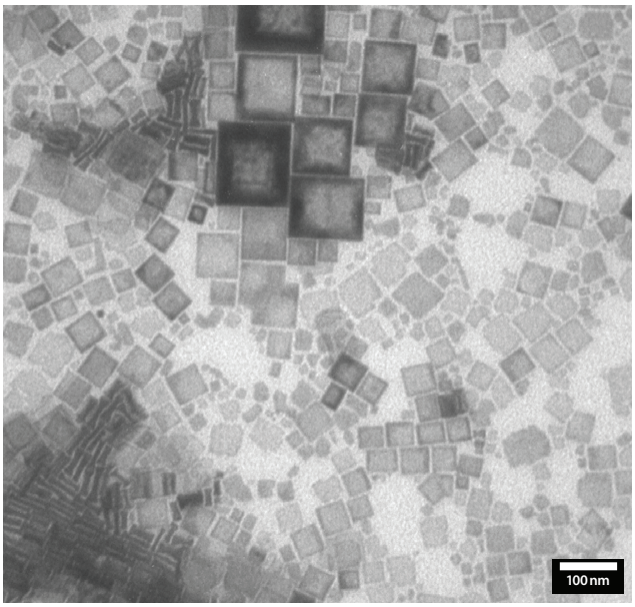
TEM: Covalent Organic Frameworks

Particles on carbon film



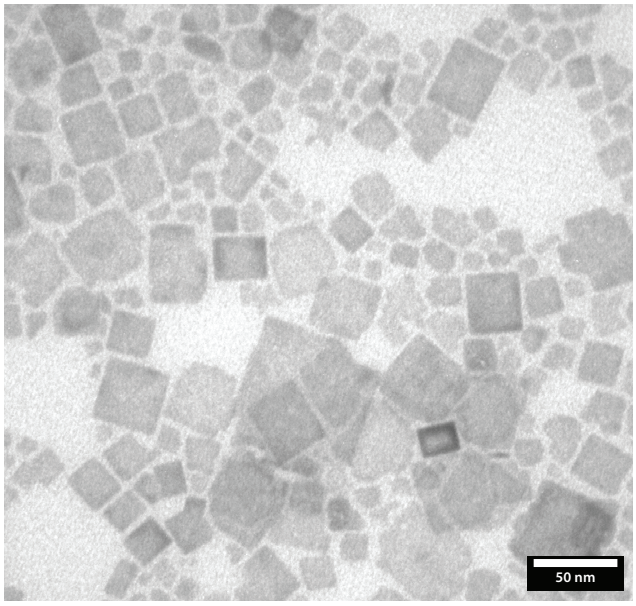
TEM: Metal Organic Framework

Particles on carbon film



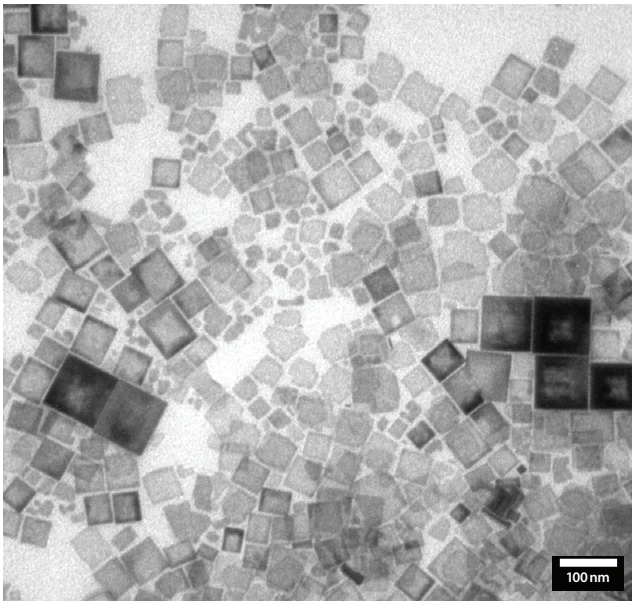
TEM: Metal Organic Framework

Particles on carbon film



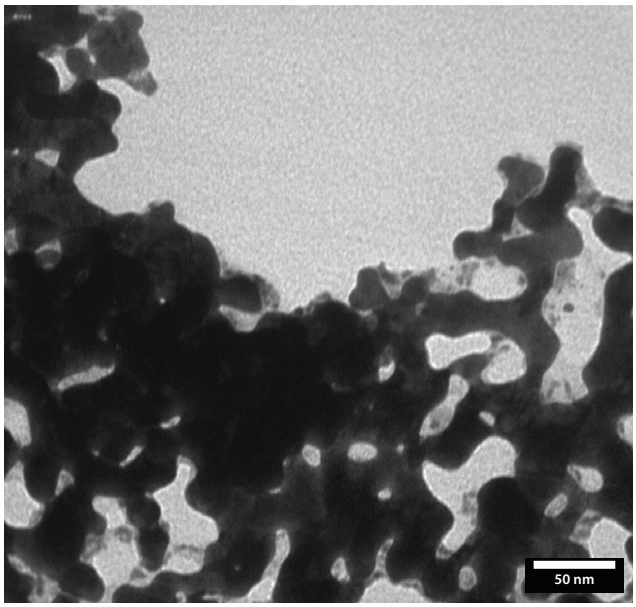
TEM: Metal Organic Framework

Particles on carbon film



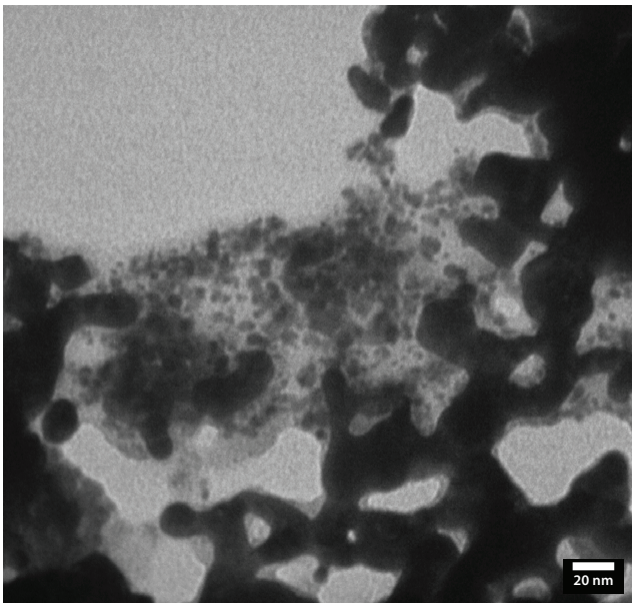
TEM: Metal Organic Framework

Particles on carbon film



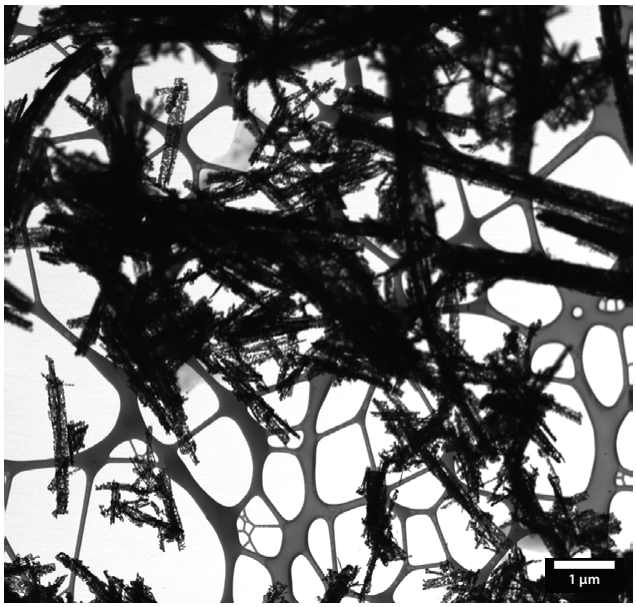
TEM: FAPbBr3/Bi2WO6 Hybrid Material

Particles on carbon film



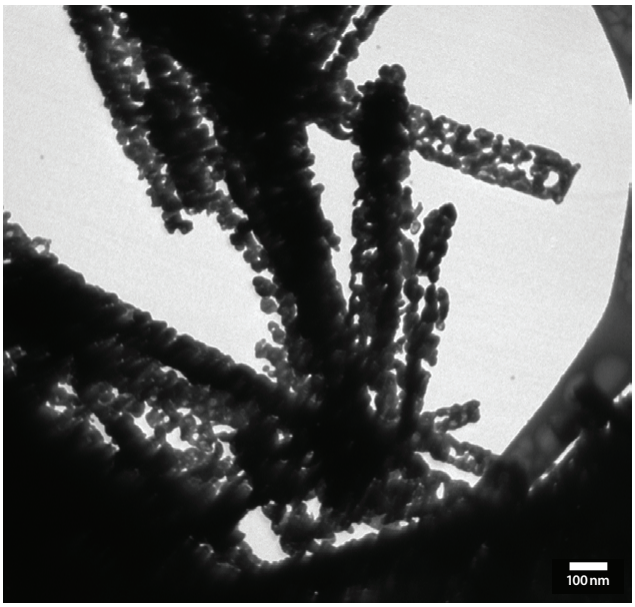
TEM: FAPbBr3/Bi2WO6 Hybrid Material

Particles on carbon film



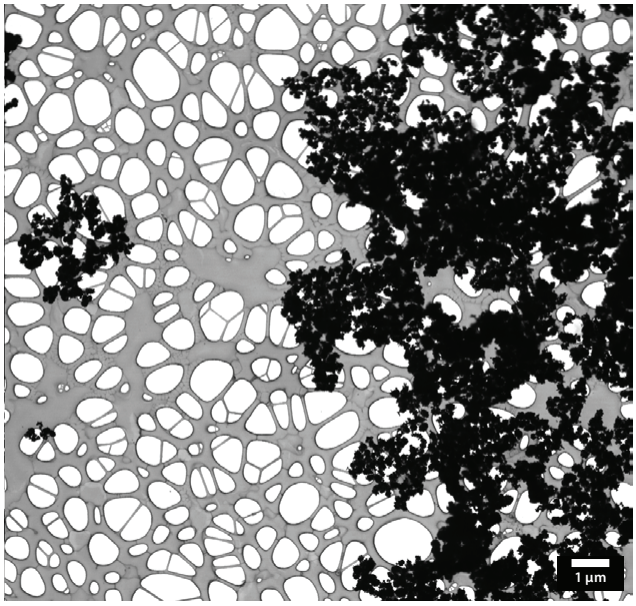
STEM 15 kV: TiN Bars

Particles on carbon film



STEM 15 kV: TiN Bars

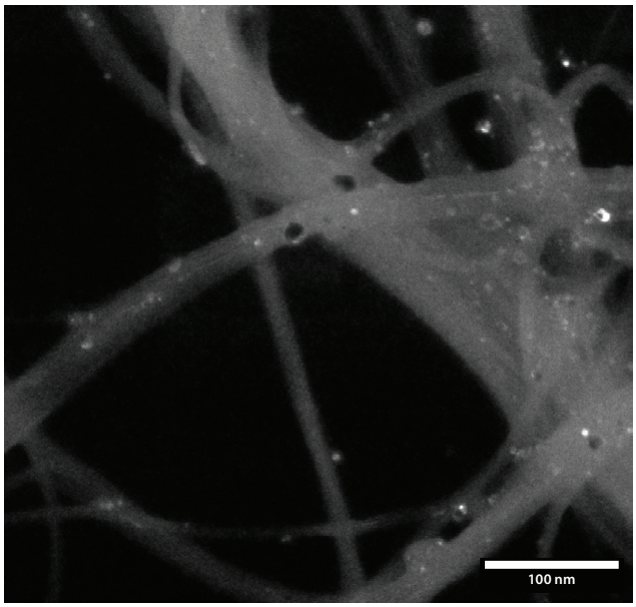
Particles on carbon film



STEM 15 kV: TiN Spheres

Particles on carbon film

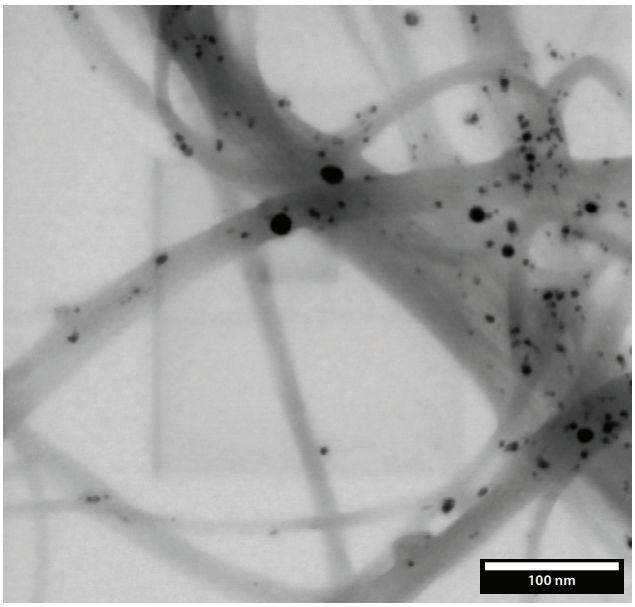
Sample courtesy of Bc. Hanna Dilenko, Palacký University Olomouc



STEM: Pt Nanoparticles with CNT

Particles on carbon film

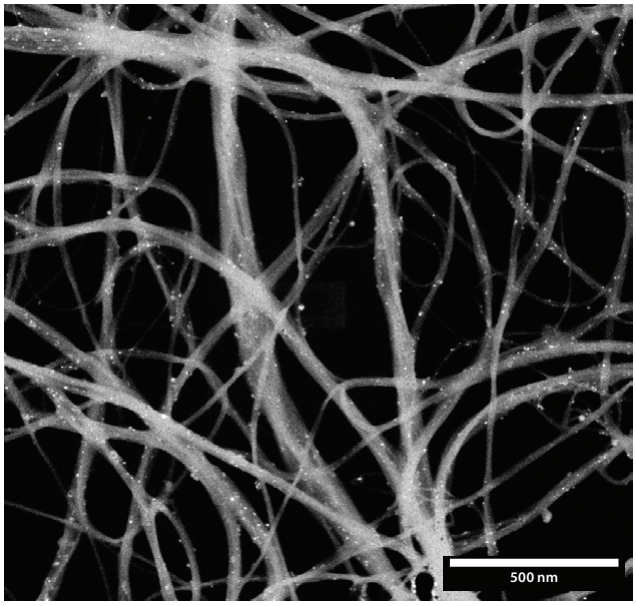
Dark field



STEM: Pt Nanoparticles with CNT

Particles on carbon film

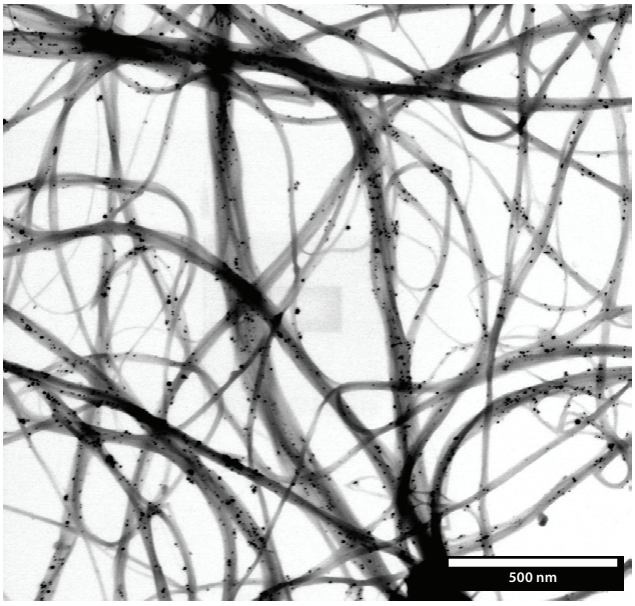
Bright field



STEM: Pt Nanoparticles with CNT

Particles on carbon film

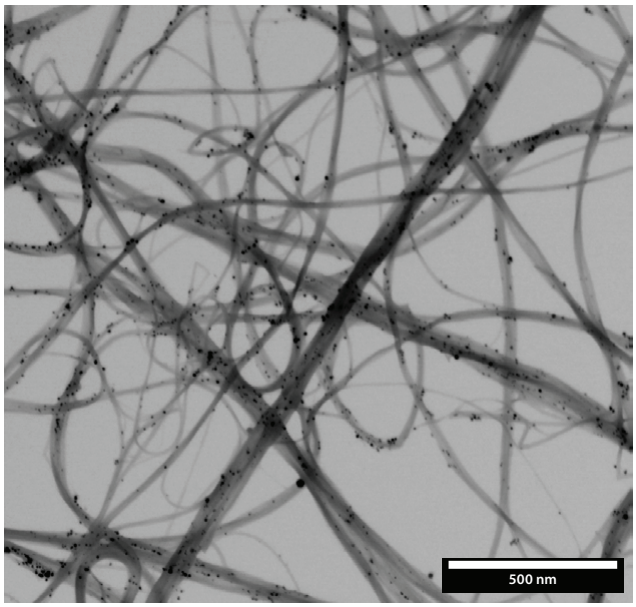
Dark field



STEM: Pt Nanoparticles with CNT

Particles on carbon film

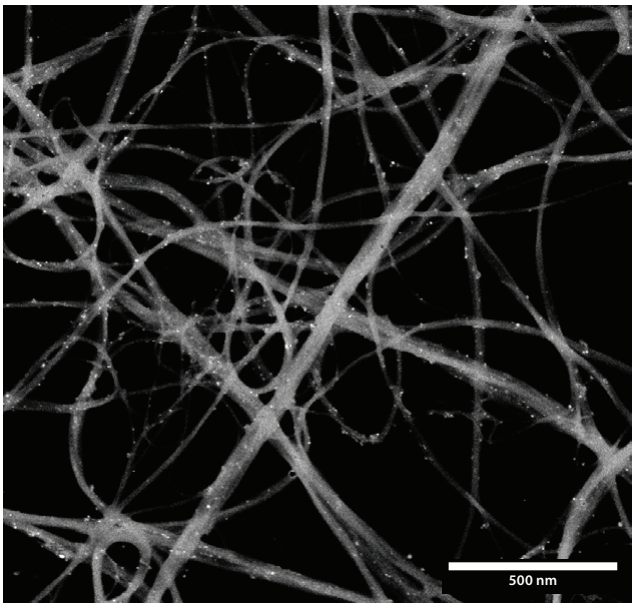
Bright field



STEM: Pt Nanoparticles with CNT

Particles on carbon film

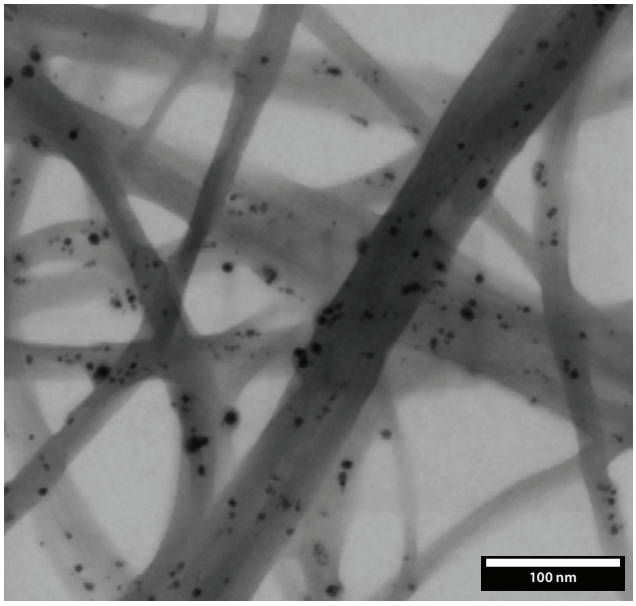
Bright field



STEM: Pt Nanoparticles with CNT

Particles on carbon film

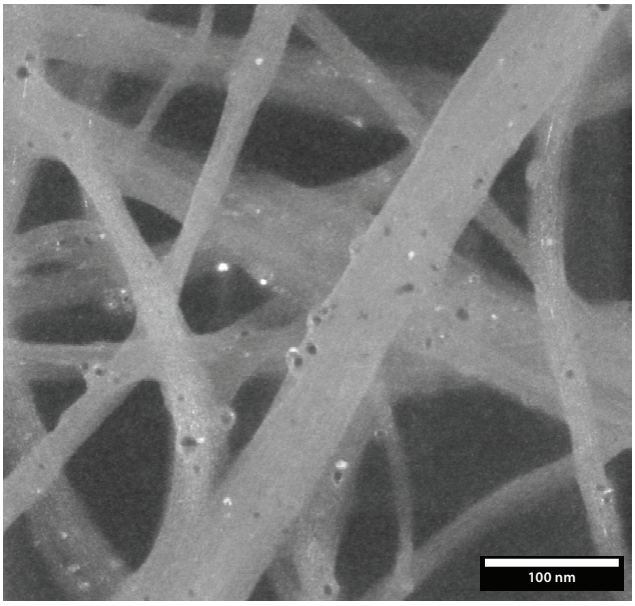
Dark field



STEM: Pt Nanoparticles with CNT

Particles on carbon film

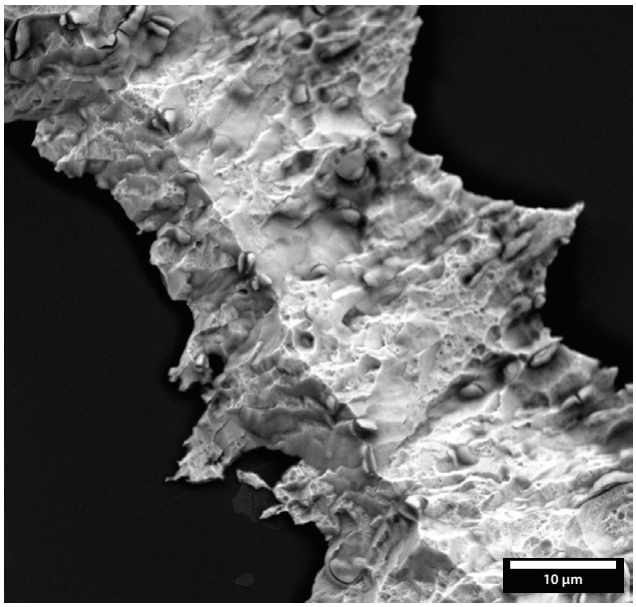
Bright field



STEM: Pt Nanoparticles with CNT

Particles on carbon film

Dark field



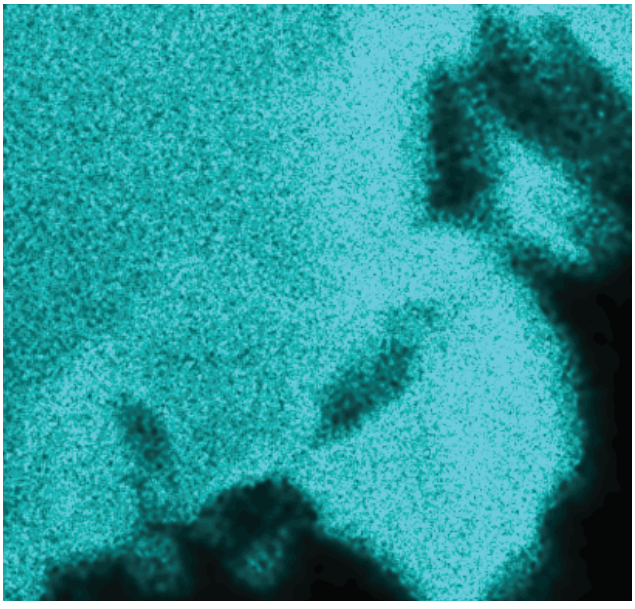
SEM: NIOx

BSE. *Sample on grid*

EDS: NIOx

Sample on grid

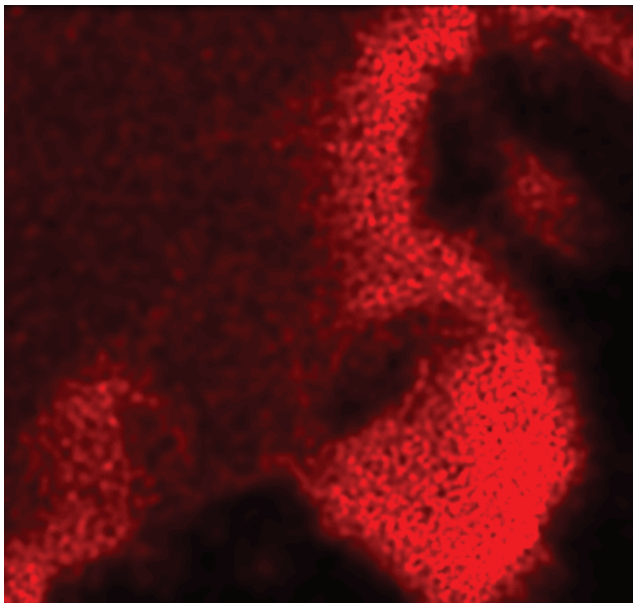
EDS STEM



EDS: NIOx

Sample on grid

Ni mapping



EDS: NIOx

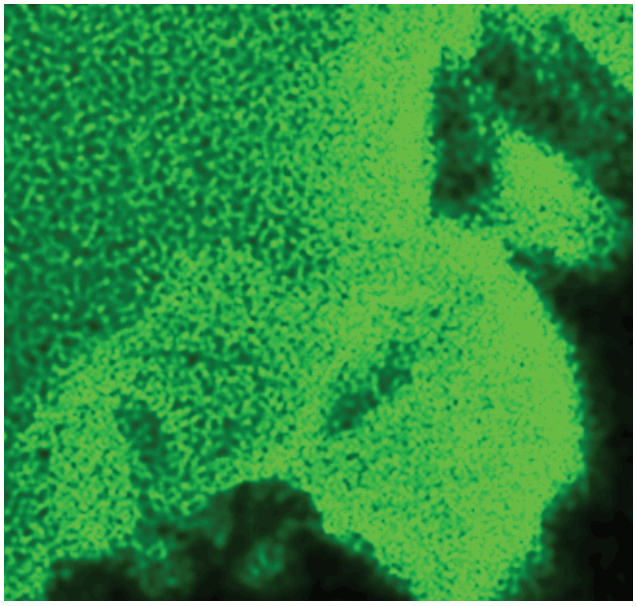
Sample on grid

C mapping

EDS: NIOx

Sample on grid

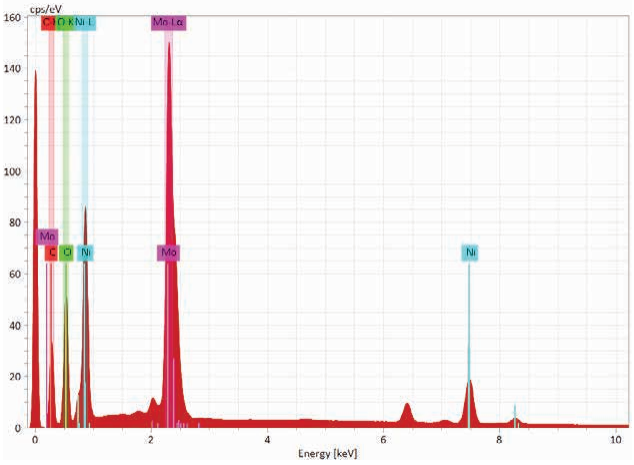
Mo mapping



EDS: NIOx

Sample on grid

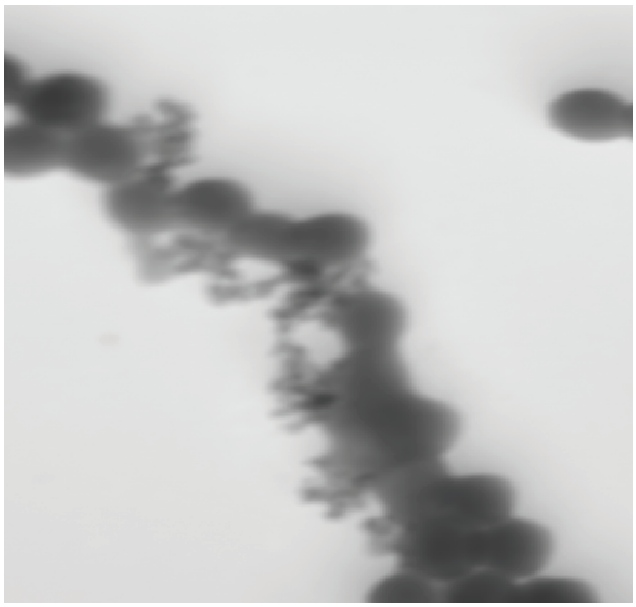
O mapping



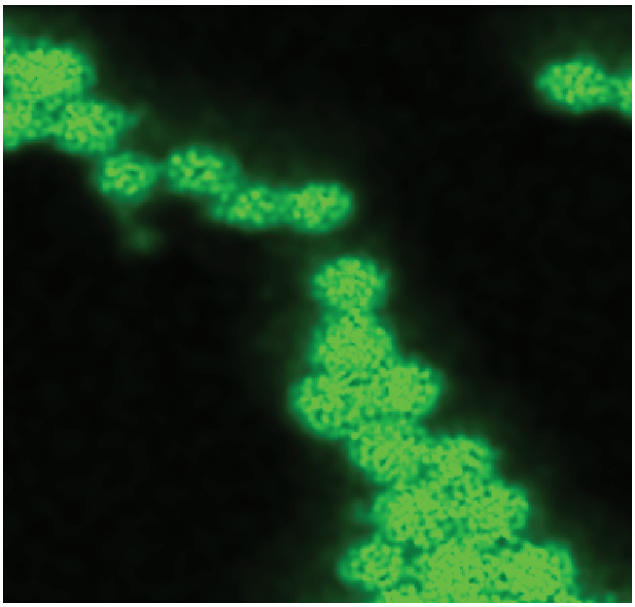
EDS: NIOx

Sample on grid

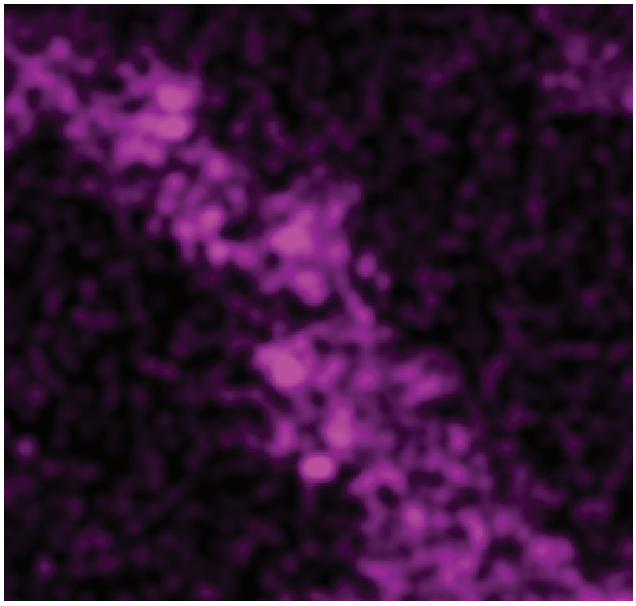
EDS spectrum



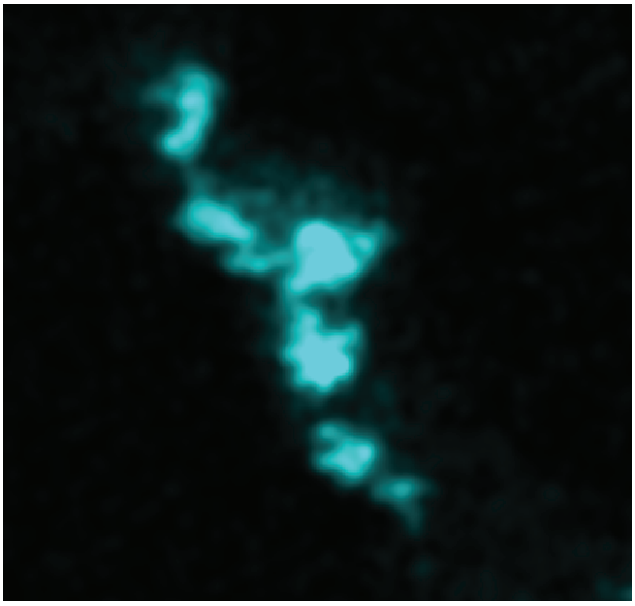
EDS: SiTiAg
particles on carbon
EDS STEM



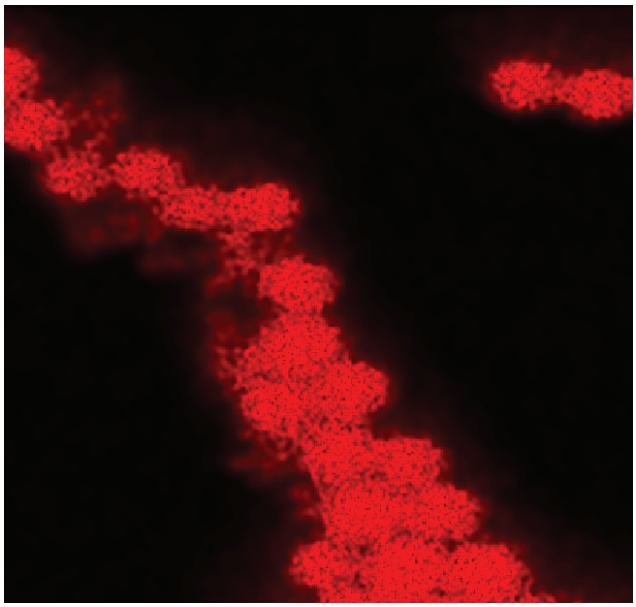
EDS: SiTiAg
particles on carbon
Si mapping



EDS: SiTiAg
particles on carbon
Ag mapping



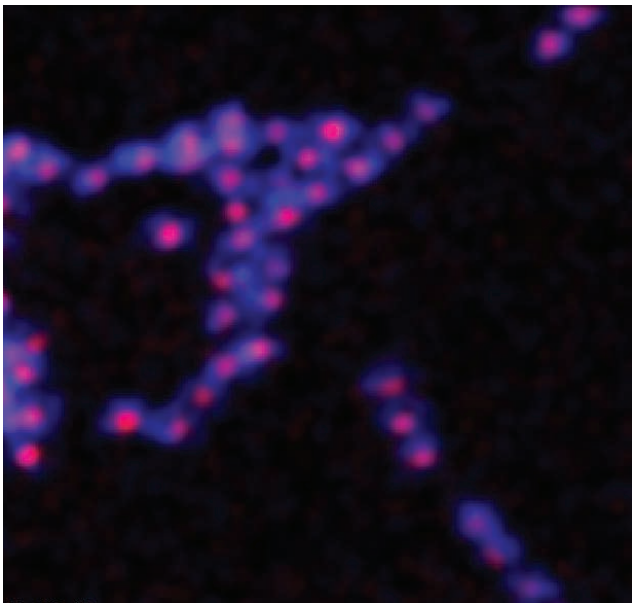
EDS: SiTiAg
particles on carbon
Ti mapping



EDS: SiTiAg

particles on carbon

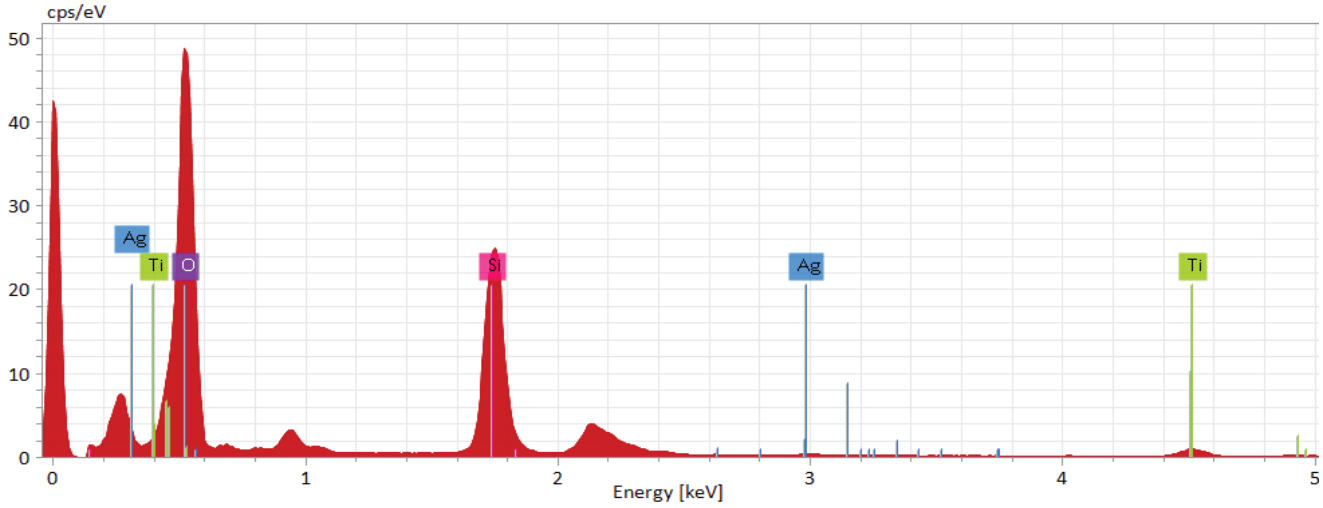
O mapping



EDS: Silica Coated Gold

particles on carbon

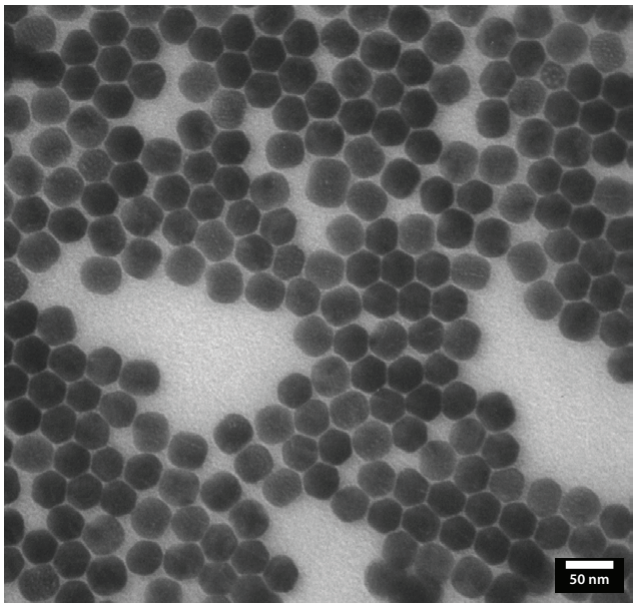
SiAu mapping



EDS: SiTiAg

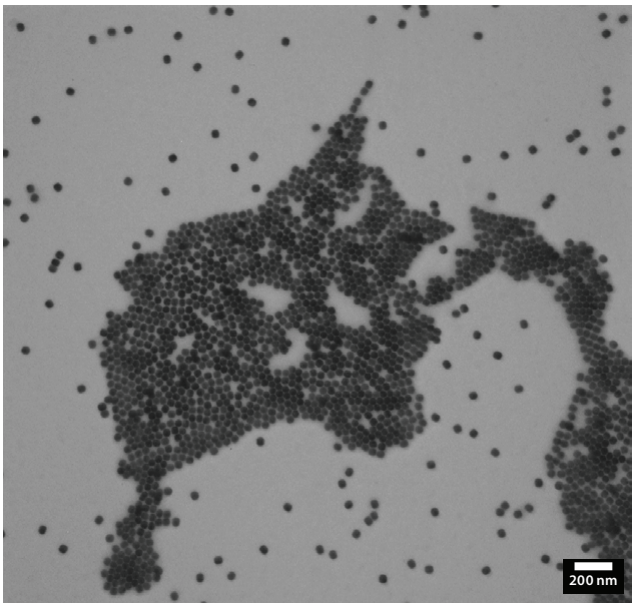
Particles on carbon

EDS spectrum



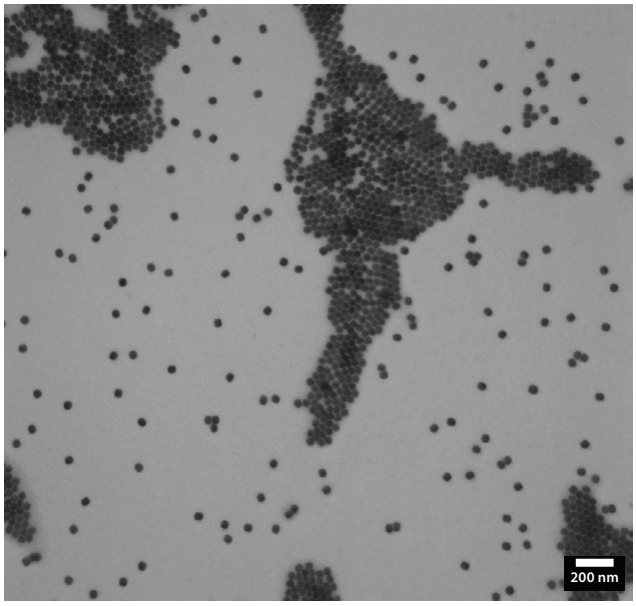
TEM: Earth Metal Nanoparticle

Particles on carbon film



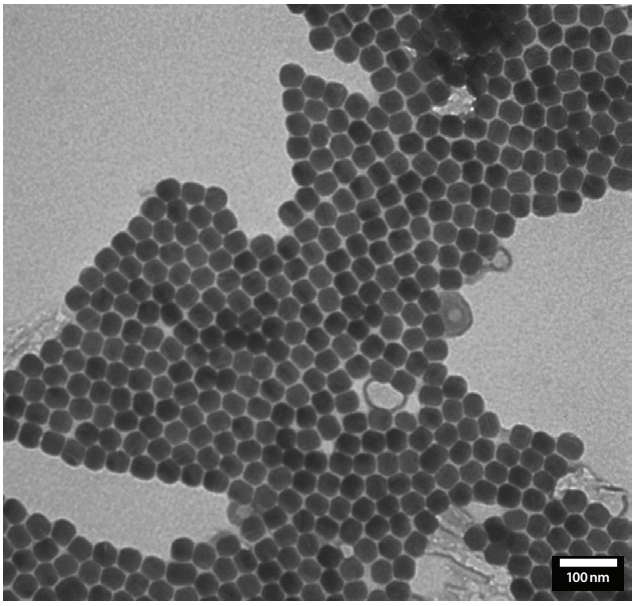
TEM: Earth Metal Nanoparticle

Particles on carbon film



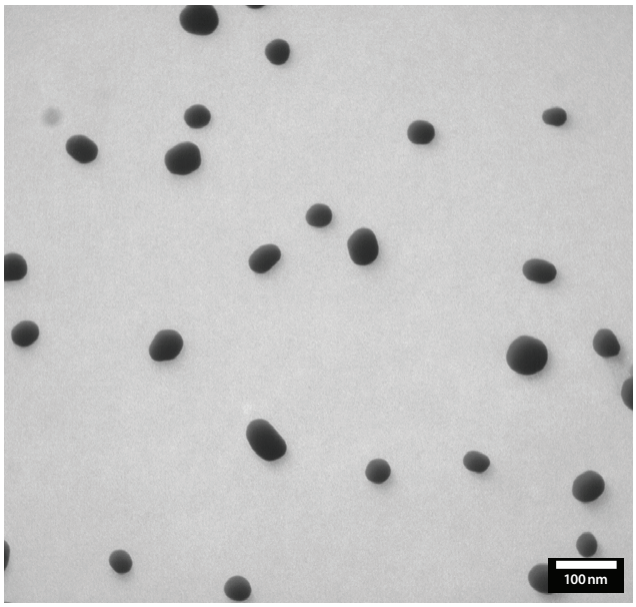
TEM: Earth Metal Nanoparticle

Particles on carbon film



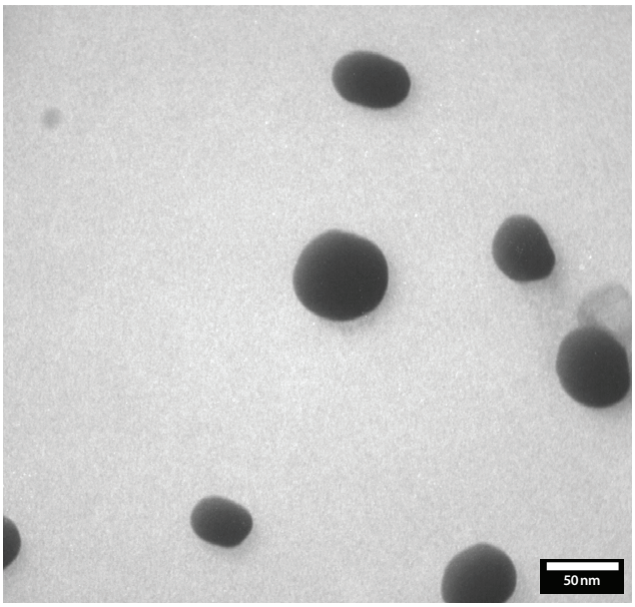
TEM: Earth Metal Nanoparticle

Particles on carbon film



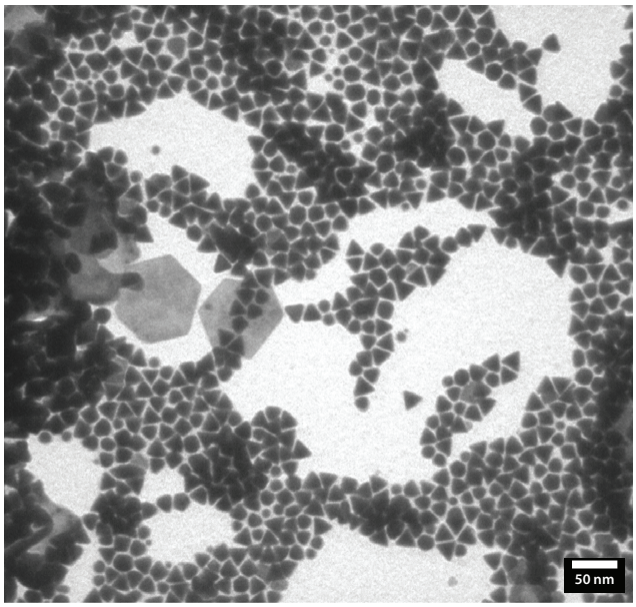
TEM: Au Nanoparticles

Particles on carbon film



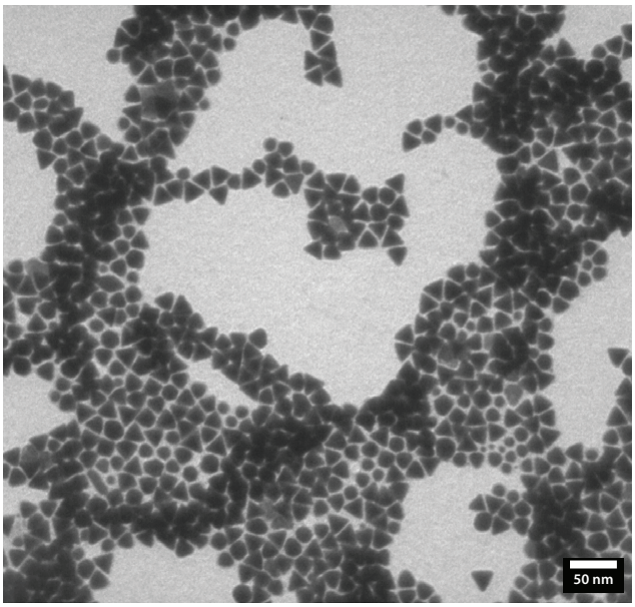
TEM: Au Nanoparticles

Particles on carbon film



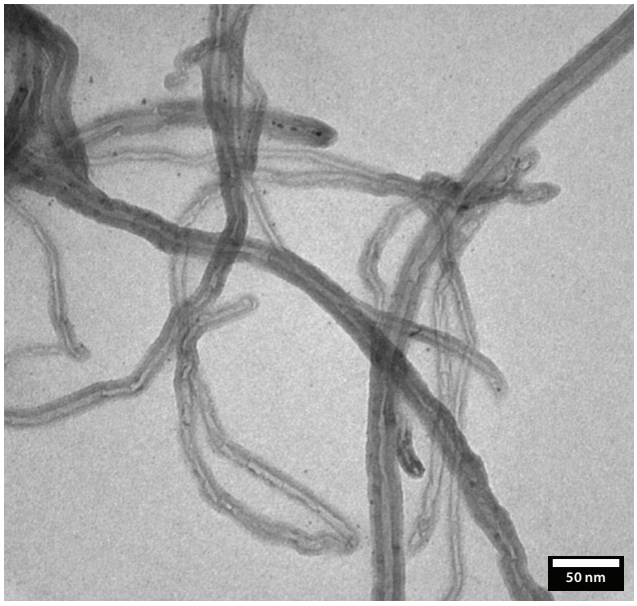
TEM: Pd Nanoparticles

Particles on carbon film



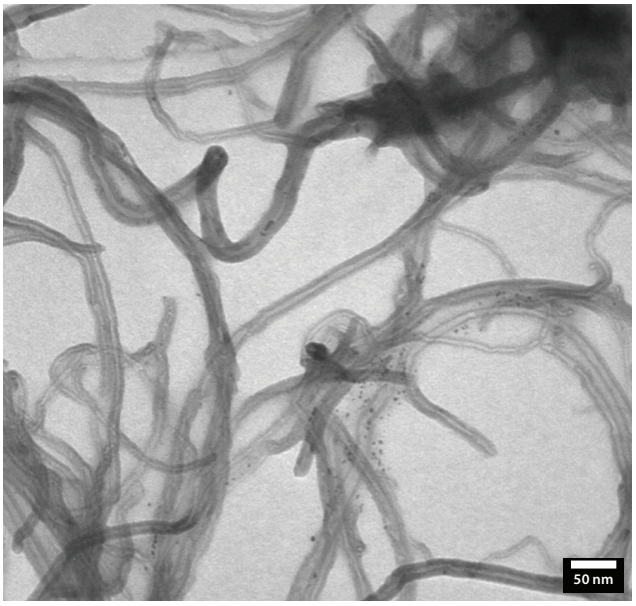
TEM: Pd Nanoparticles

Particles on carbon film



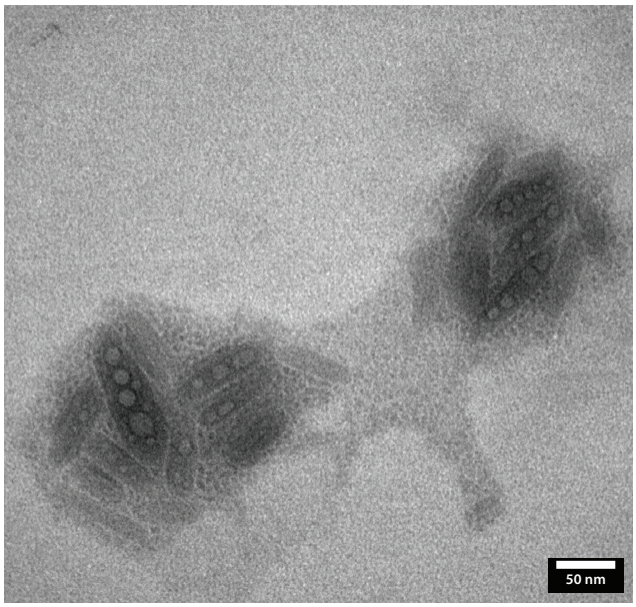
TEM: Pt Nanoparticles with CNT

Particles on carbon film



TEM: Pt Nanoparticles with CNT

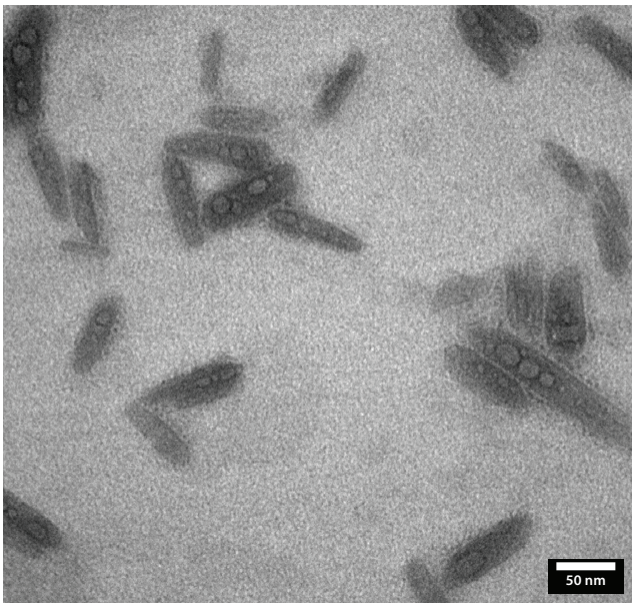
Particles on carbon film



TEM: AMN and ACC Particles

Particles on carbon film

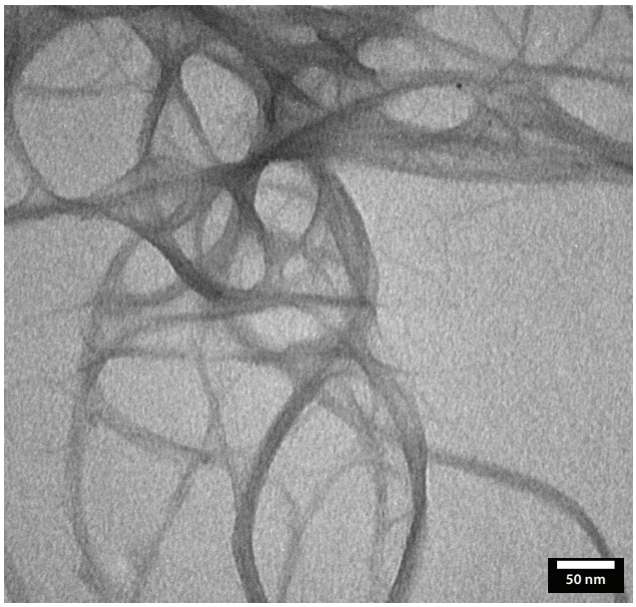
Colloidally stabilized amorphous magnesium carbonate and calcium carbonate particles



TEM: AMN and ACC Particles

Particles on carbon film

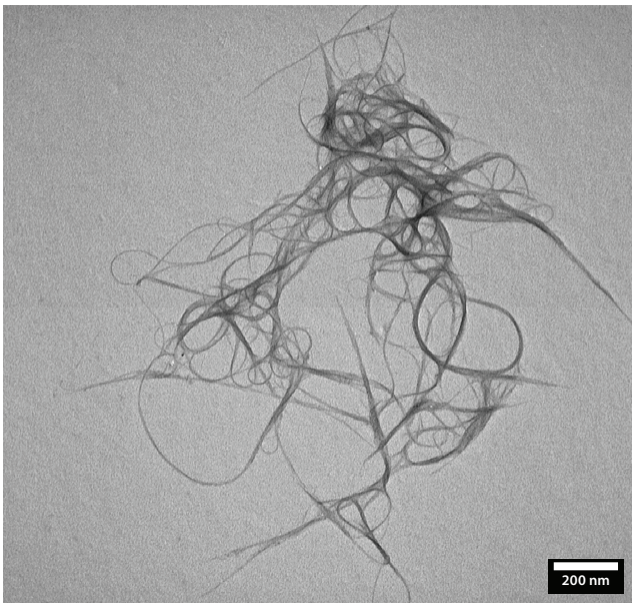
Colloidally stabilized amorphous magnesium carbonate and calcium carbonate particles



TEM: Nanotubes (SWCNT)

Particles on carbon film

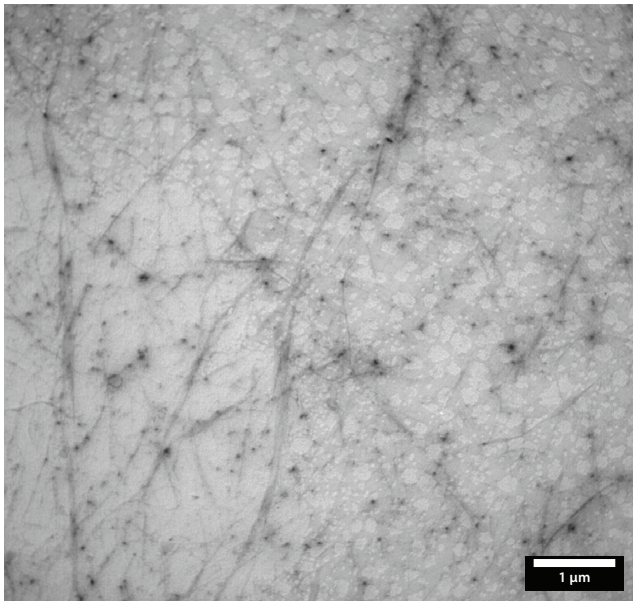
Single-wall carbon nanotubes



TEM: Nanotubes (SWCNT)

Particles on carbon film

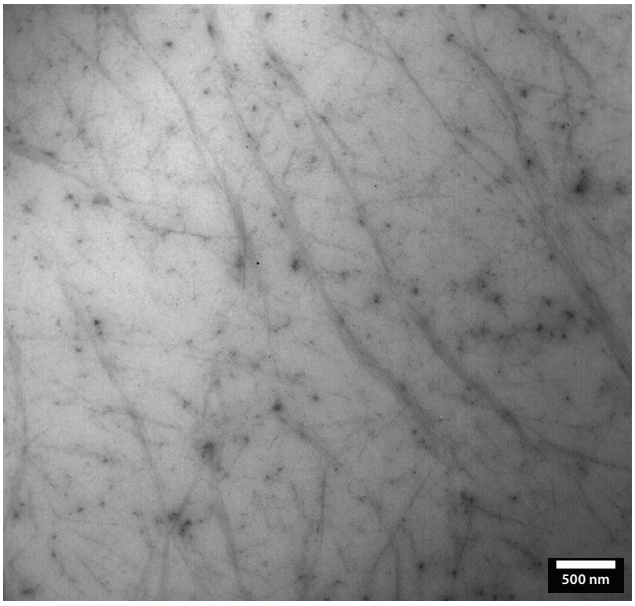
Single-wall carbon nanotubes



TEM: Nanotubes (SWCNT)

Particles on carbon film

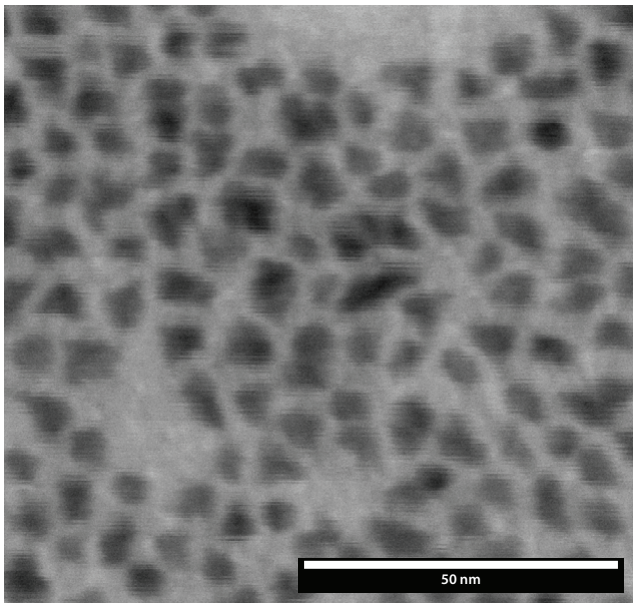
Single-wall carbon nanotubes



TEM: Nanotubes (SWCNT)

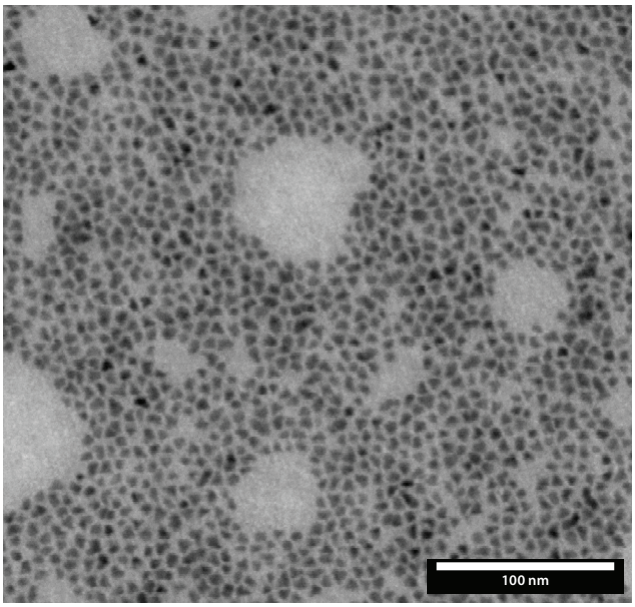
Particles on carbon film

Single-wall carbon nanotubes



STEM 10 kV: 6nm ZnS Qdots

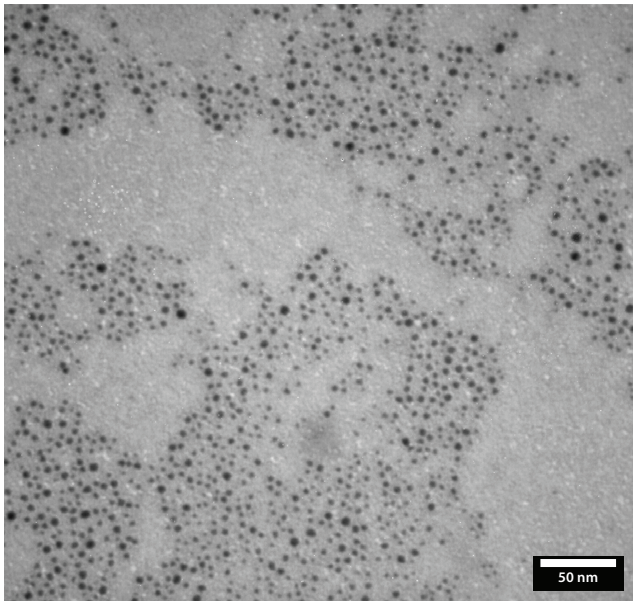
Particles on carbon film



STEM 10 kV: 6nm ZnS Qdots

Particles on carbon film

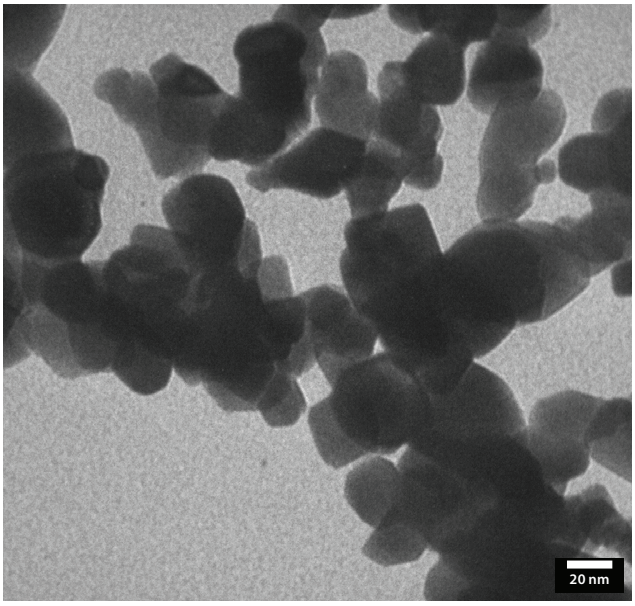
#136 C1, C2 a 11



TEM: Ag Nanoparticles with PVP

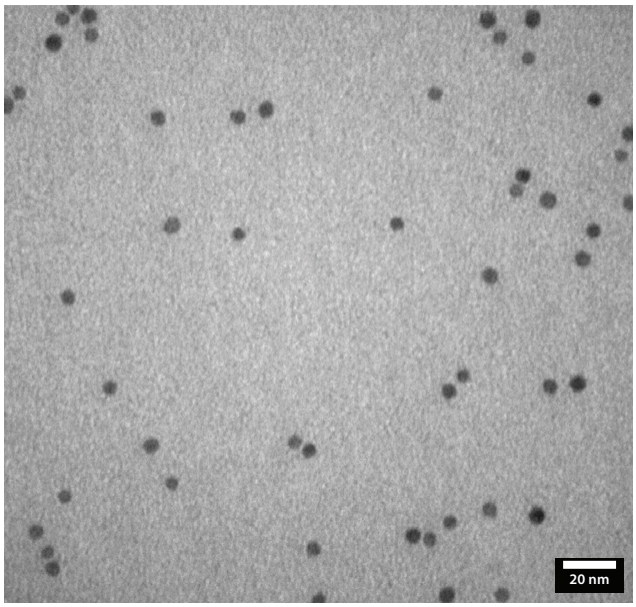
Particles on carbon film

PVP coated silver nanoparticles



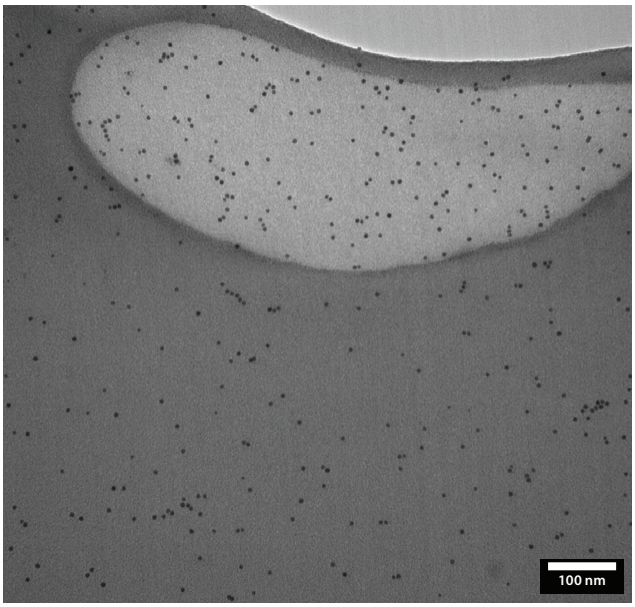
TEM: TiO_2 Nanoparticles

Particles on carbon film



TEM: Fe_3O_4 Nanoparticles

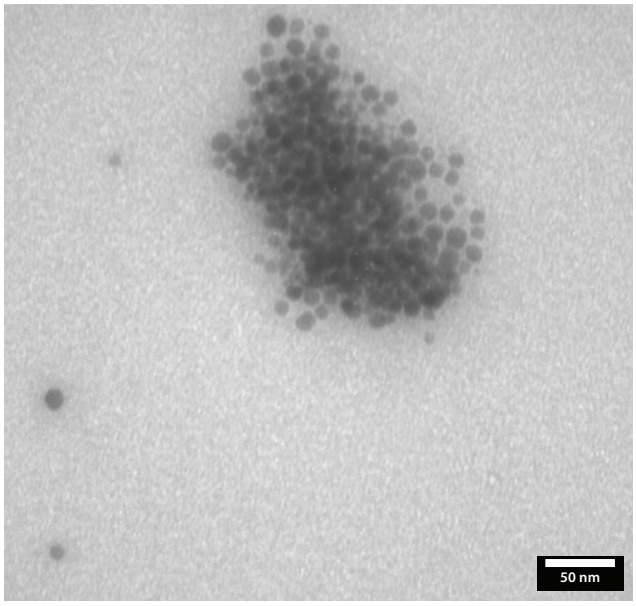
Particles on carbon film



TEM: Fe_3O_4 Nanoparticles

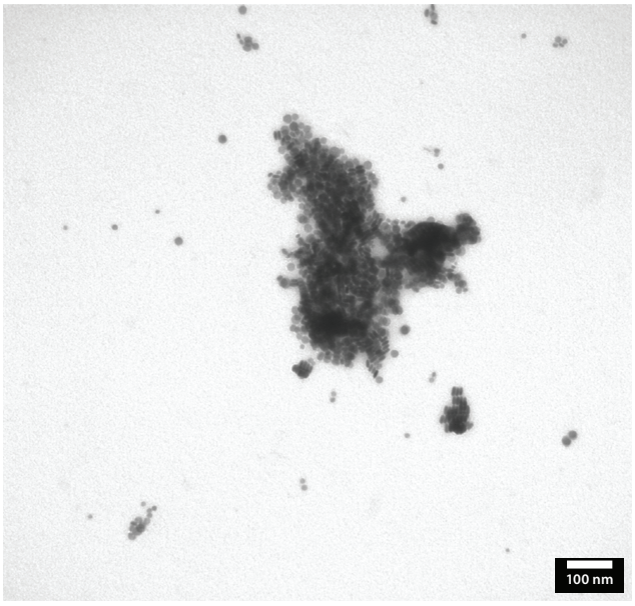
Particles on carbon film

#109



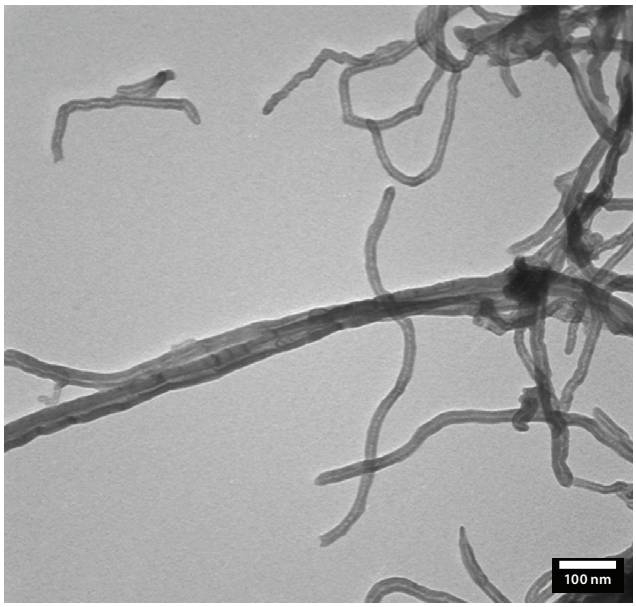
TEM: Semiconducting Nanoparticles

Particles on carbon film



TEM: Semiconducting Nanoparticles

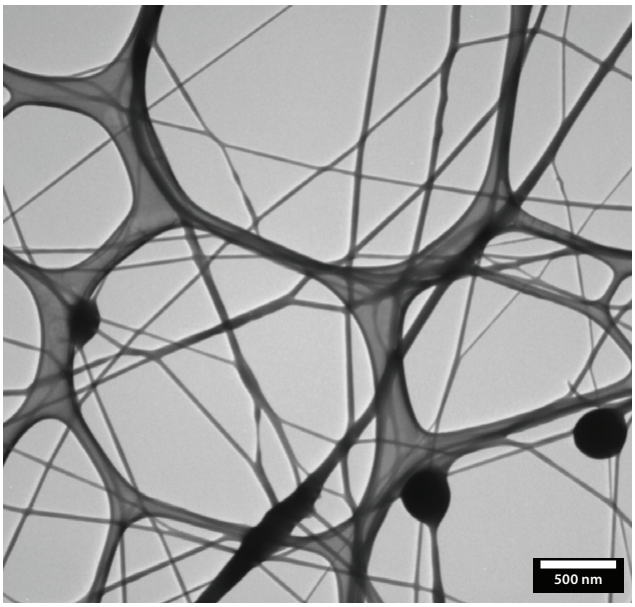
Particles on carbon film



TEM: Nanotubes (MWCNT)

Particles on carbon film

Multi-wall carbon nanotubes

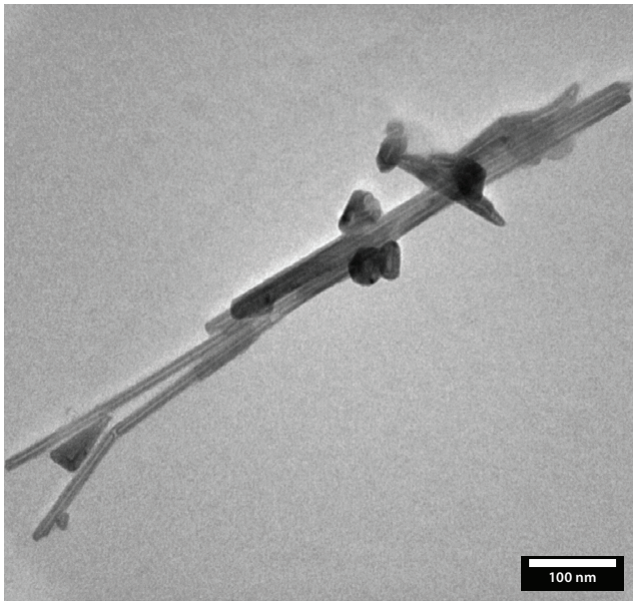


TEM: Nylon fibres

Particles on carbon film

Carbon nanotubes with nylon fibres

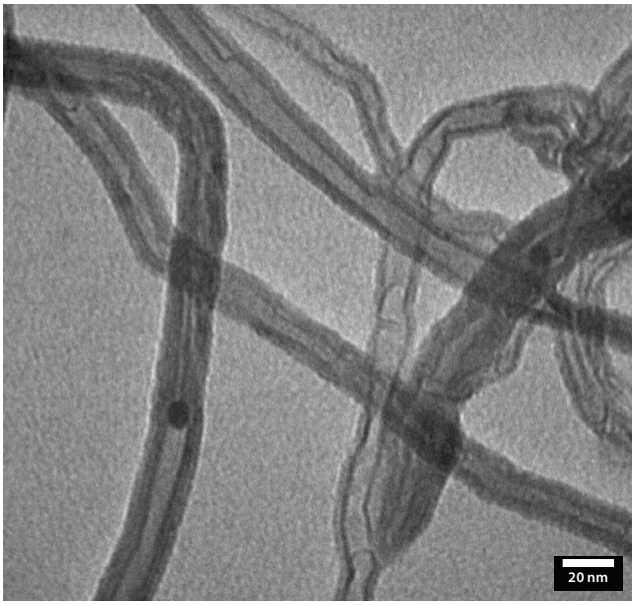
#NO NUMBER



TEM: Nanotubes (SWCNT)

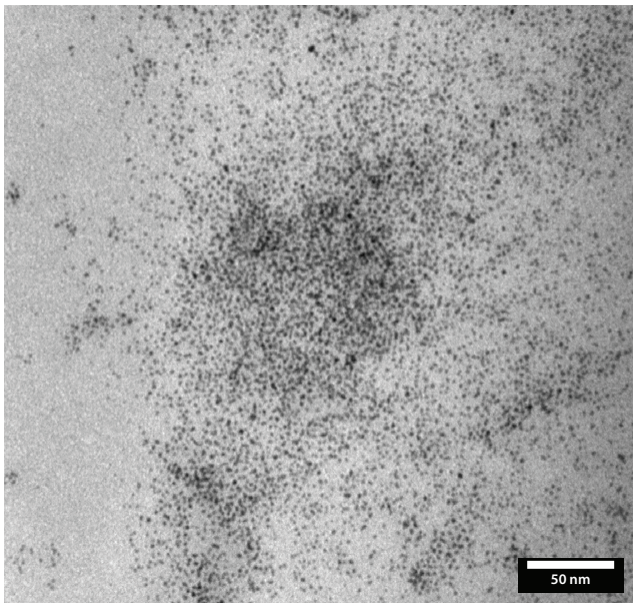
Particles on carbon film

Single-wall carbon nanotubes



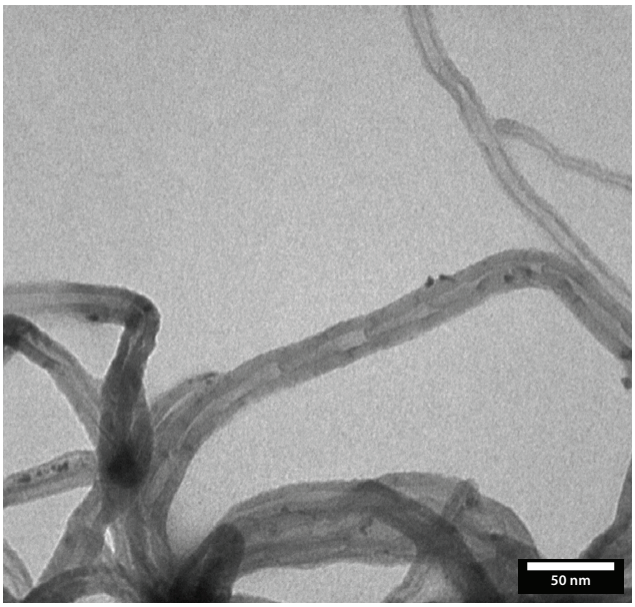
TEM: Nanotubes (CNT)

Particles on carbon film



TEM: 4 nm Pt Nanoparticles

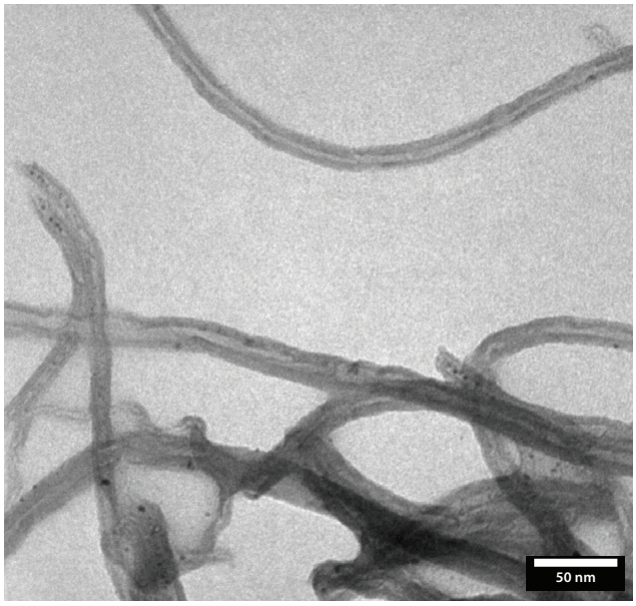
Particles on carbon film



TEM: Pt Nanoparticles with CNT

Particles on carbon film

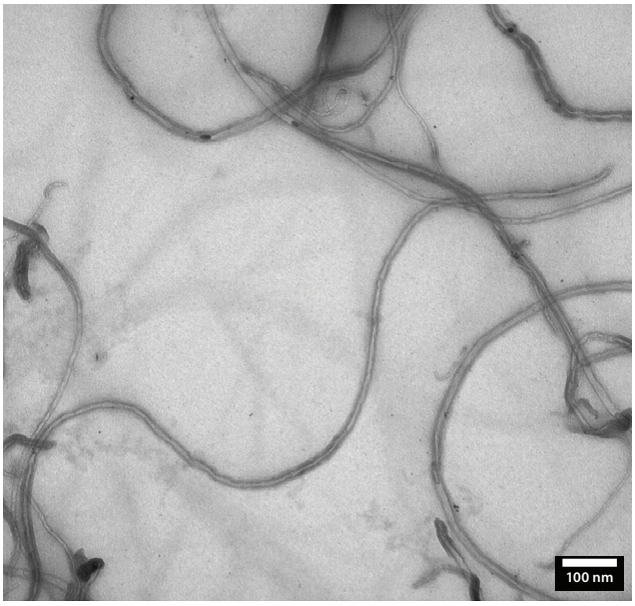
Carbon nanotubes with platinum nanoparticles embedded – particles resolved inside nanotubes



TEM: Pt Nanoparticles with CNT

Particles on carbon film

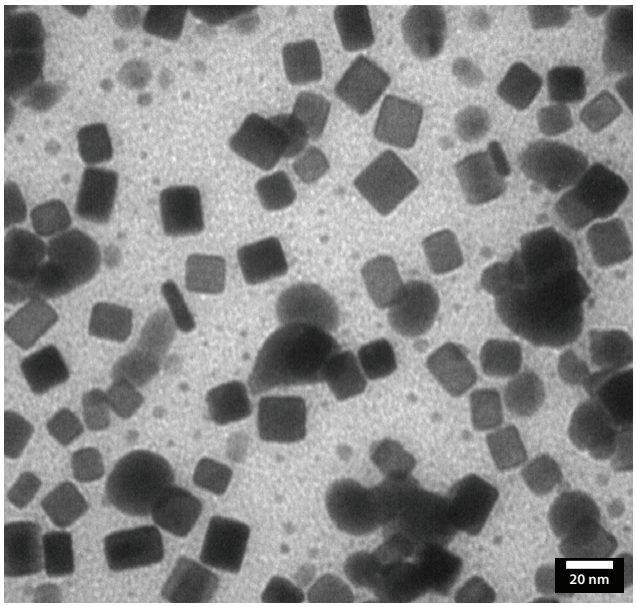
Carbon nanotubes with platinum nanoparticles embedded – particles resolved inside nanotubes



TEM: Pt Nanoparticles with CNT

Particles on carbon film

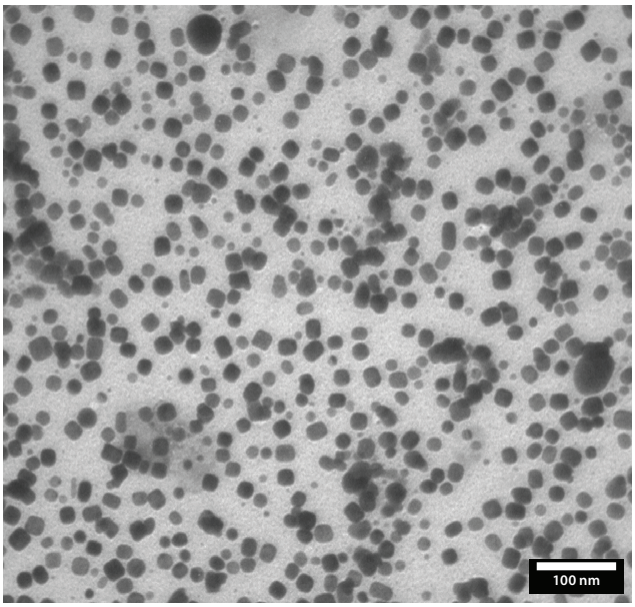
Carbon nanotubes with platinum nanoparticles embedded – particles resolved inside nanotubes



TEM: Colloidal Pd-Ag

Particles on carbon film

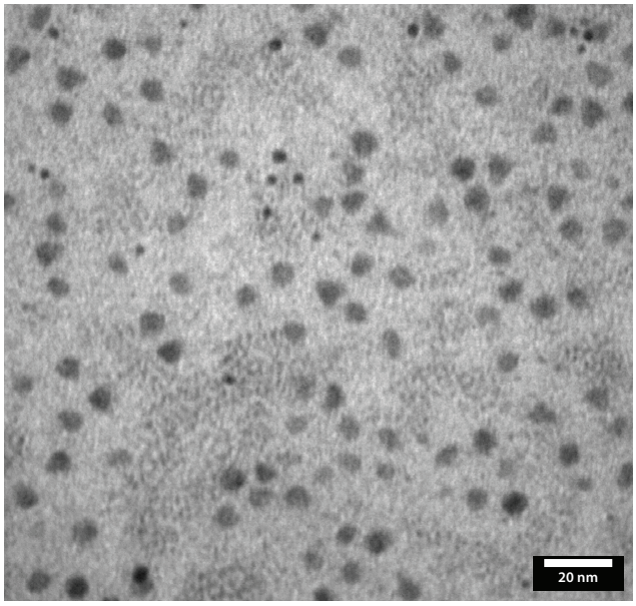
Mixture of colloidal Pd-Ag nanoparticles (1:5)



TEM: Colloidal Pd-Ag

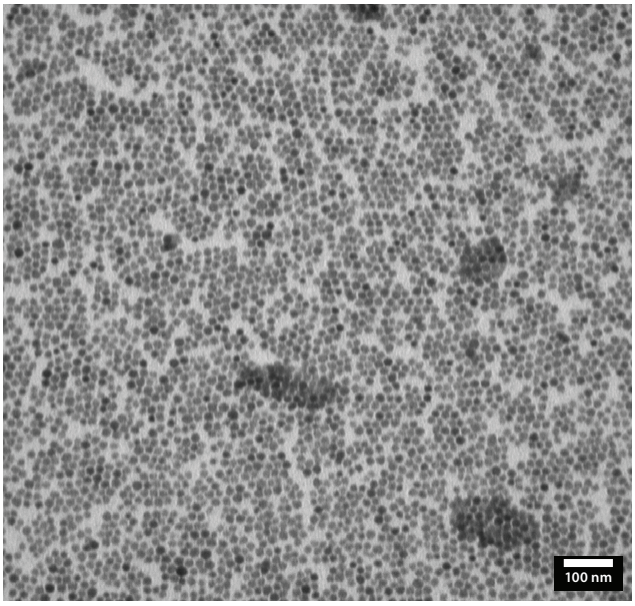
Particles on carbon film

Mixture of colloidal Pd-Ag nanoparticles (1:5)



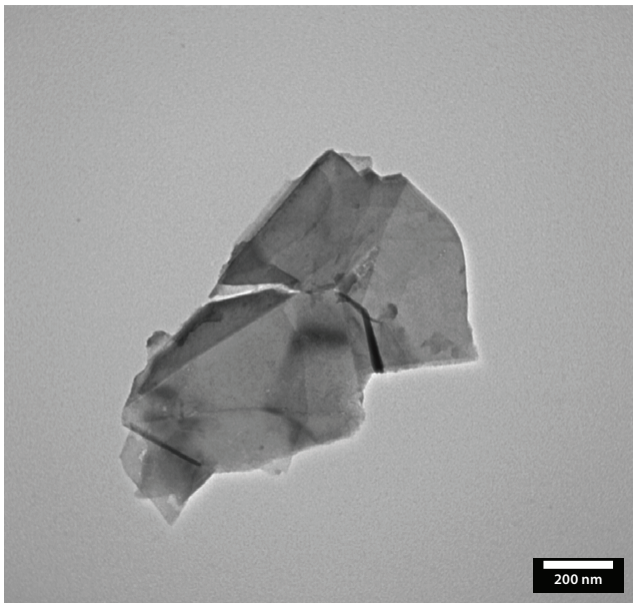
TEM: Quantum Dots

Particles on carbon film



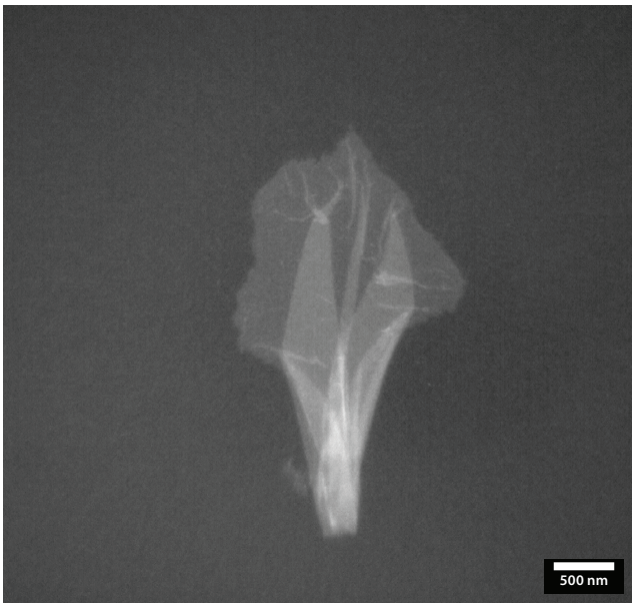
TEM: 8 nm PbS Nanoparticles

Particles on carbon film



TEM: Graphene Nanoplates

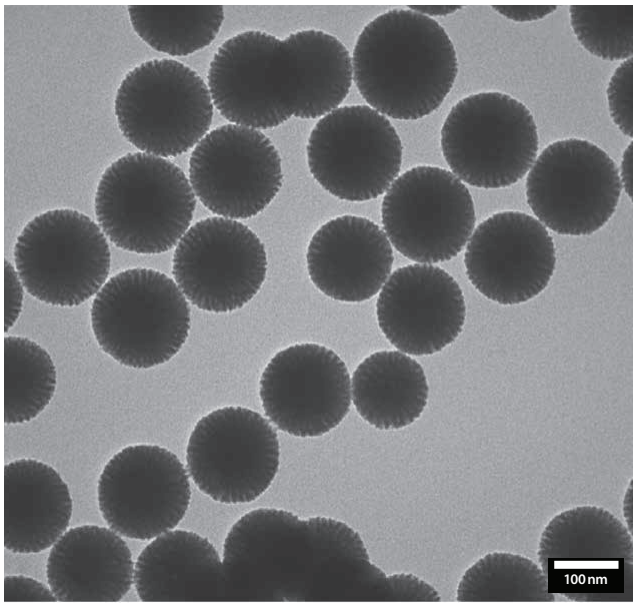
Particles on carbon film



TEM: Graphene Oxide Crystal

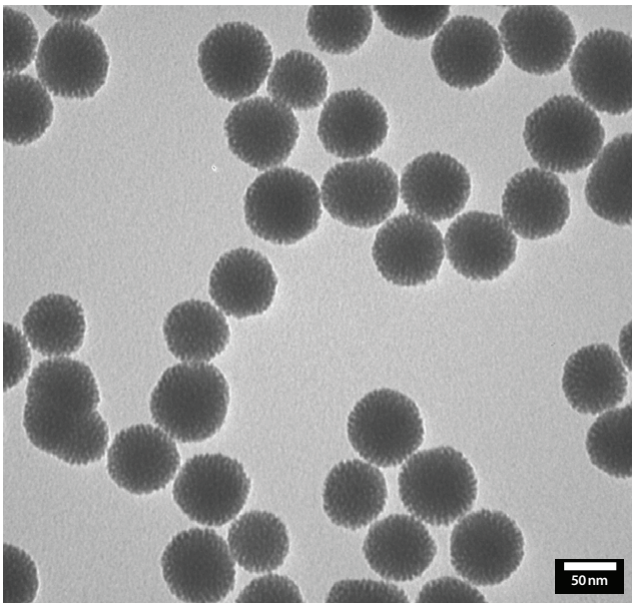
Particles on carbon film

Dark field



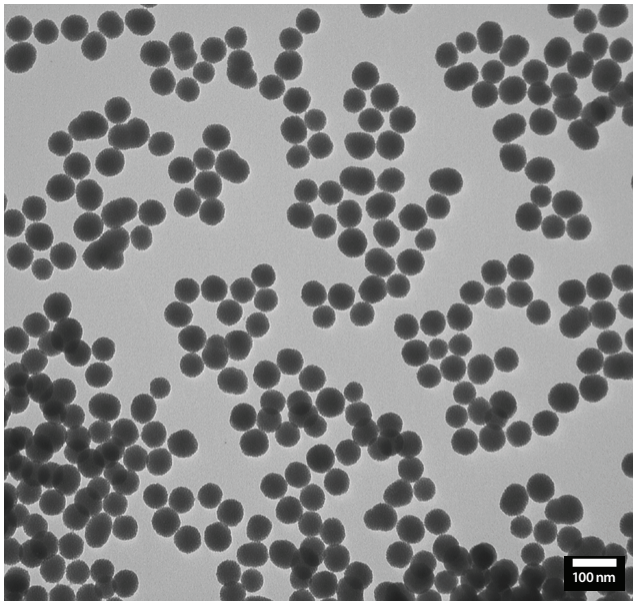
TEM: Mesoporous Silica

Particles on carbon film



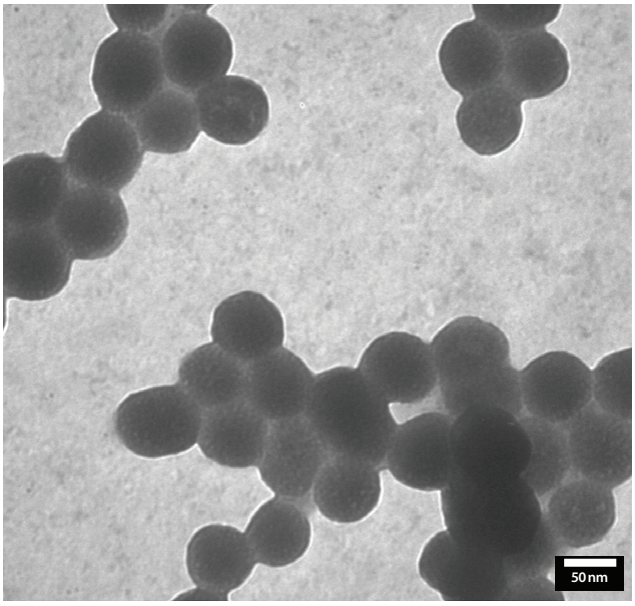
TEM: Mesoporous Silica

Particles on carbon film



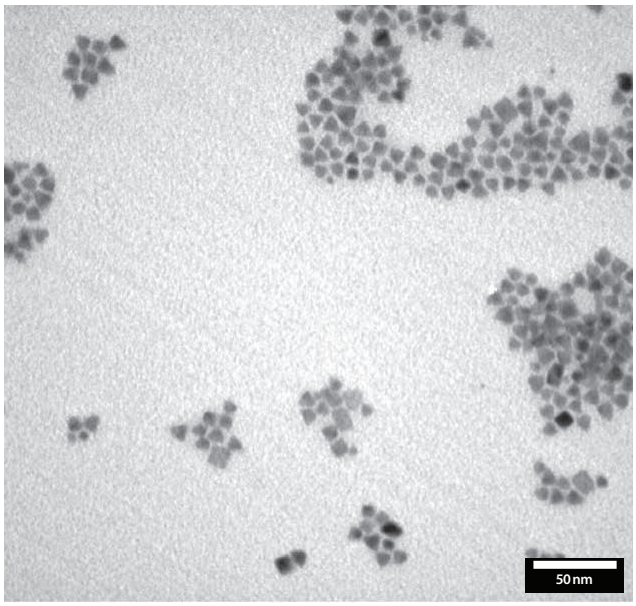
TEM: Mesoporous Silica

Particles on carbon film



TEM: Mesoporous Silica

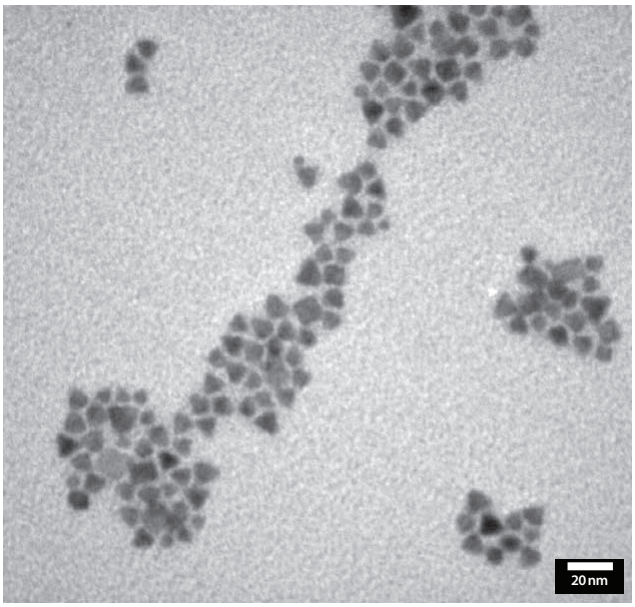
Particles on carbon film



TEM: CdSe/CdS Quantum Dots

Particles on carbon film

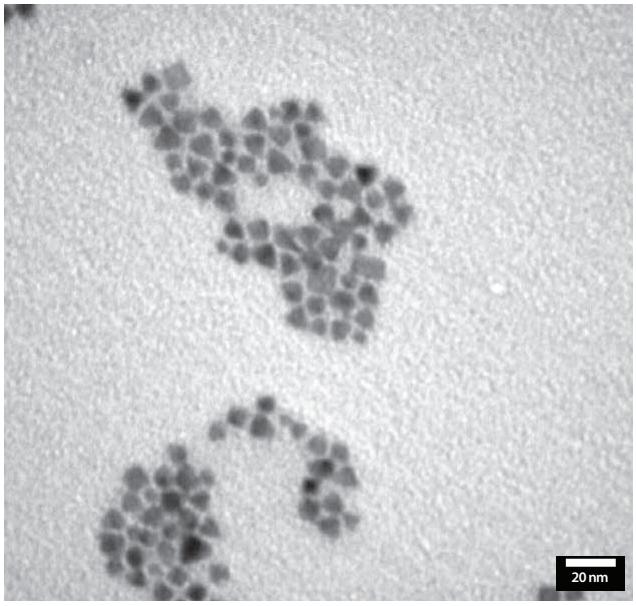
CdSe core covered by CdS shell



TEM: CdSe/CdS Quantum Dots

Particles on carbon film

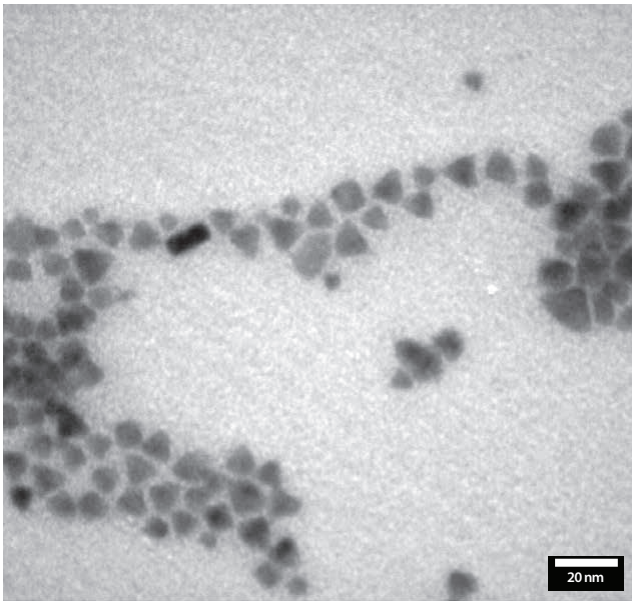
CdSe core covered by CdS shell



TEM: CdSe/CdS Quantum Dots

Particles on carbon film

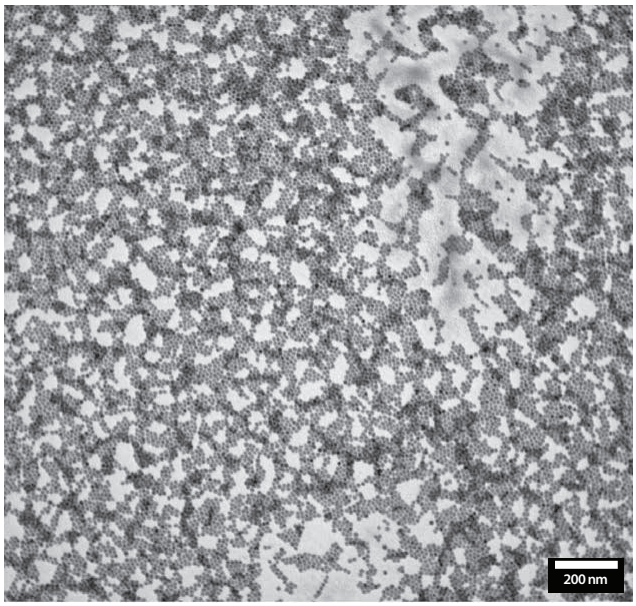
CdSe core covered by CdS shell



TEM: CdSe/CdS Quantum Dots

Particles on carbon film

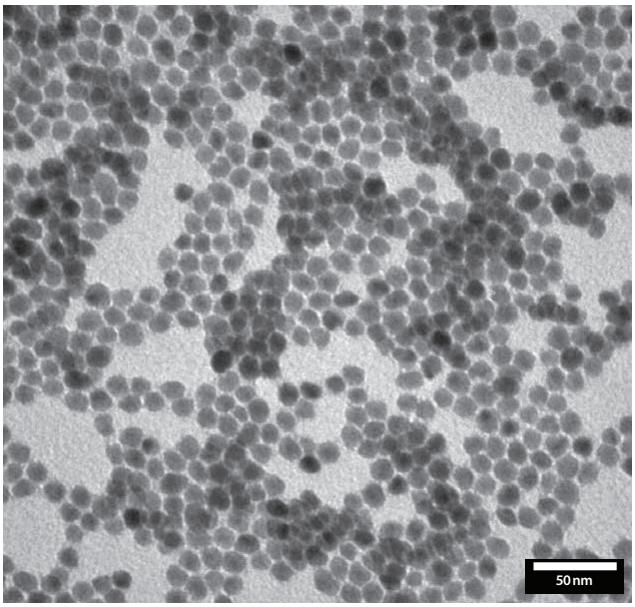
CdSe core covered by CdS shell



TEM: CdSe/ZnS Quantum Dots

Particles on carbon film

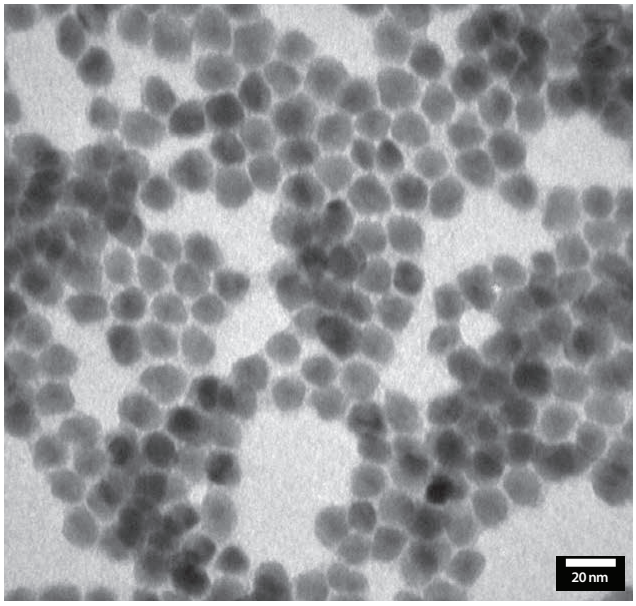
Core covered by a gradient ZnS shell



TEM: CdSe/ZnS Quantum Dots

Particles on carbon film

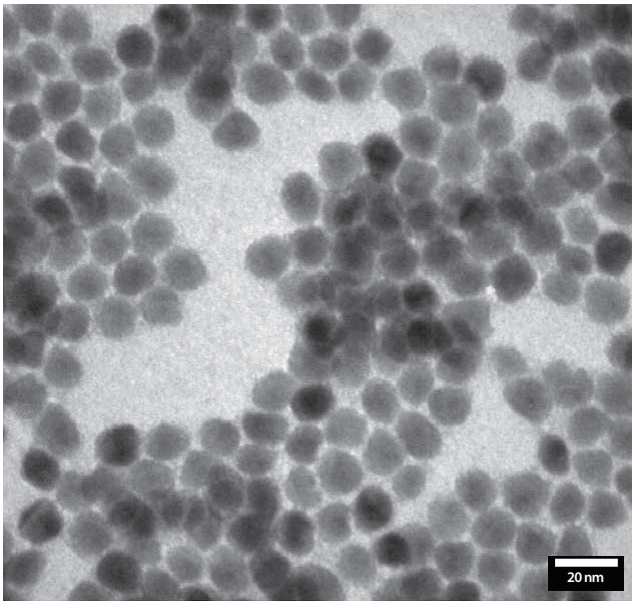
Core covered by a gradient ZnS shell



TEM: CdSe/ZnS Quantum Dots

Particles on carbon film

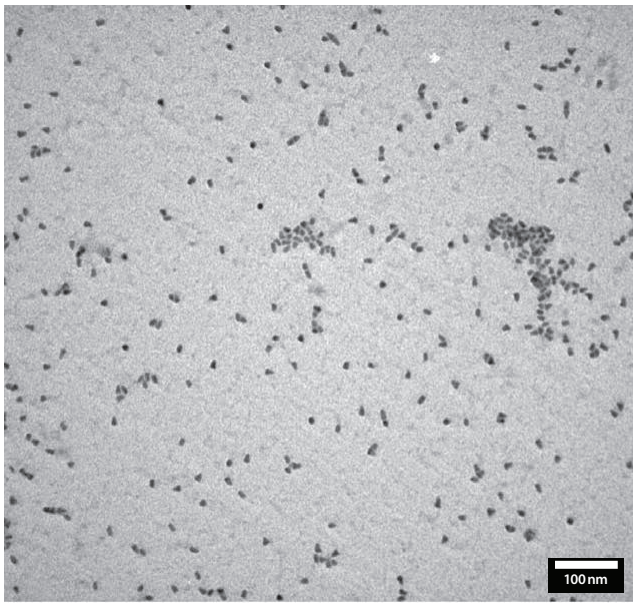
Core covered by a gradient ZnS shell



TEM: CdSe/ZnS Quantum Dots

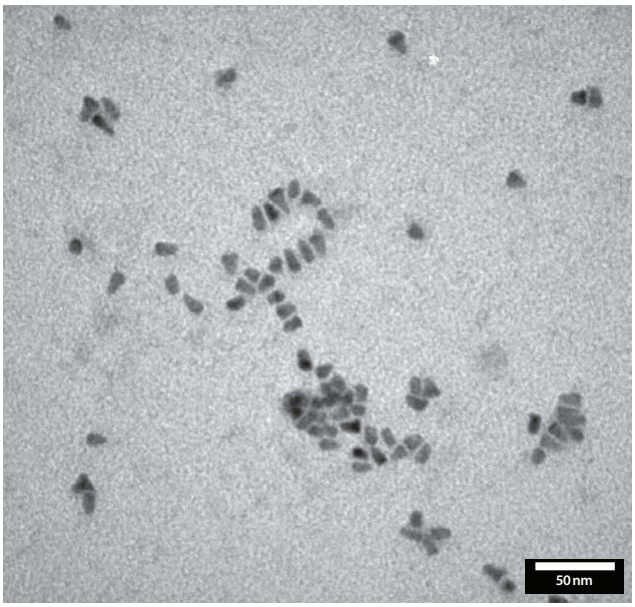
Particles on carbon film

Core covered by a gradient ZnS shell



TEM: Quantum dots

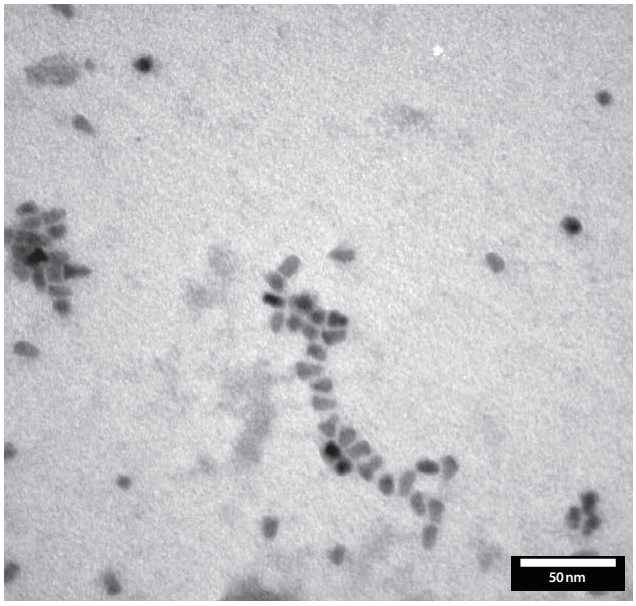
Particles on carbon film



TEM: Quantum dots

Particles on carbon film

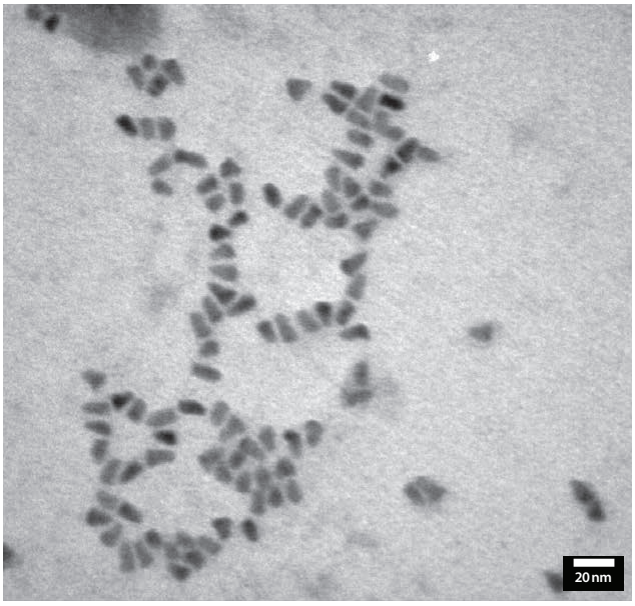
Clearly visible shape



TEM: Quantum dots

Particles on carbon film

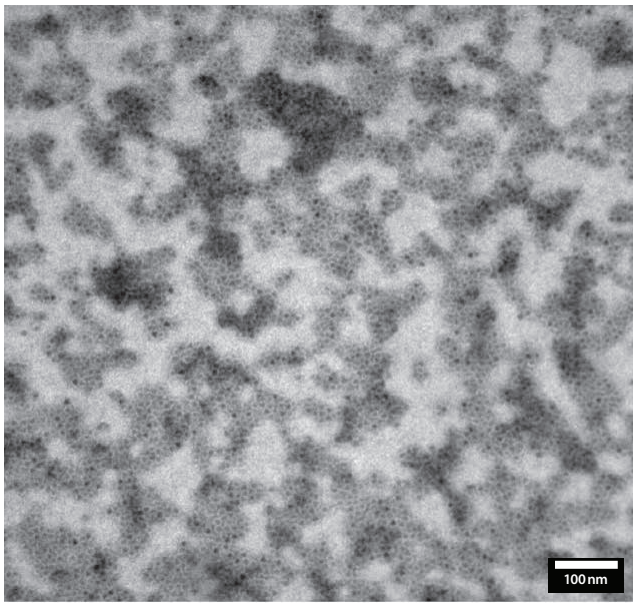
Clearly visible shape



TEM: Quantum dots

Particles on carbon film

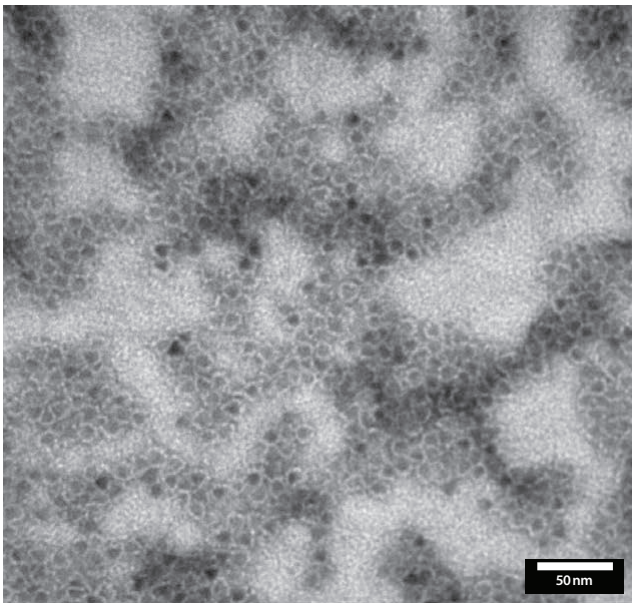
Clearly visible shape



TEM: Quantum dots

Particles on carbon film

10 nm particles, 605 ITK carboxyl, stained by 1.2 % UAc.
Point of interest: inorganic core and carboxyl shell

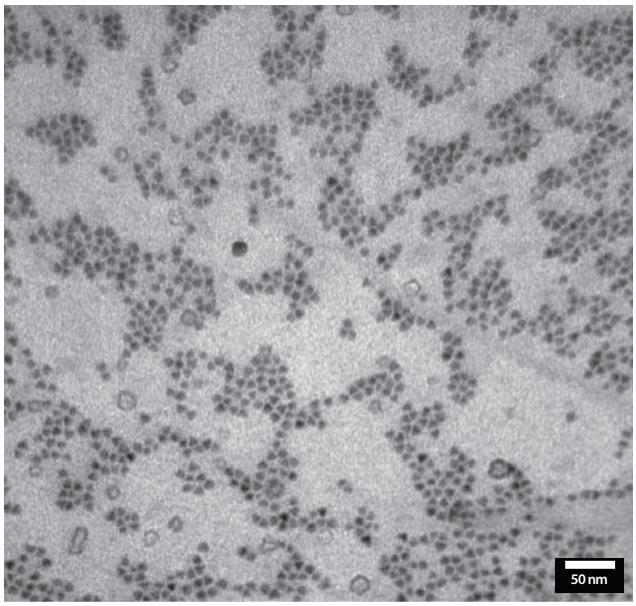


TEM: Quantum dots

Particles on carbon film

10 nm particles, 605 ITK carboxyl, stained by 1.2 % UAc.
Point of interest: inorganic core and carboxyl shell

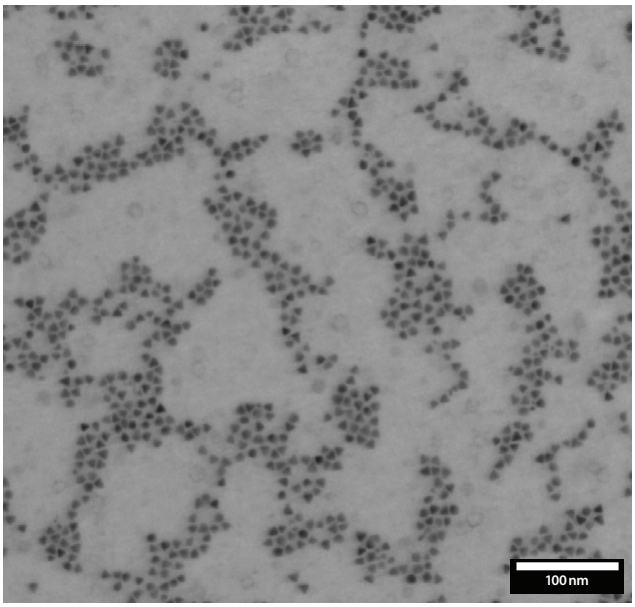
Sample courtesy of Jana Nebesářová, CSc., Biology Centre CAS



TEM: Quantum dots

Particles on carbon film

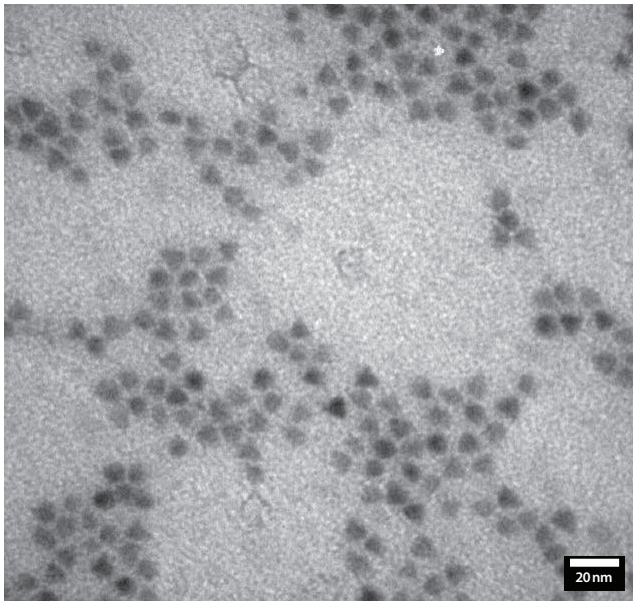
10 nm particles, 605 ITK carboxyl, unstained



STEM 15 kV: Quantum Dots

Particles on carbon film

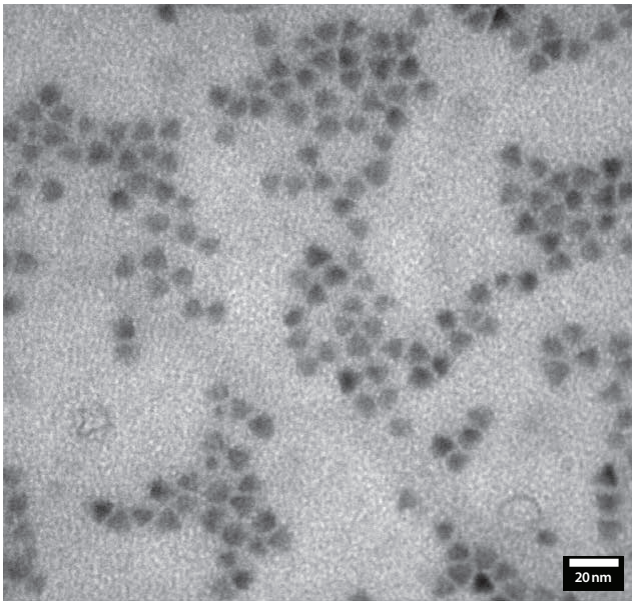
10 nm particles, 605 ITK carboxyl, unstained



TEM: Quantum dots

Particles on carbon film

10 nm particles, 605 ITK carboxyl, unstained

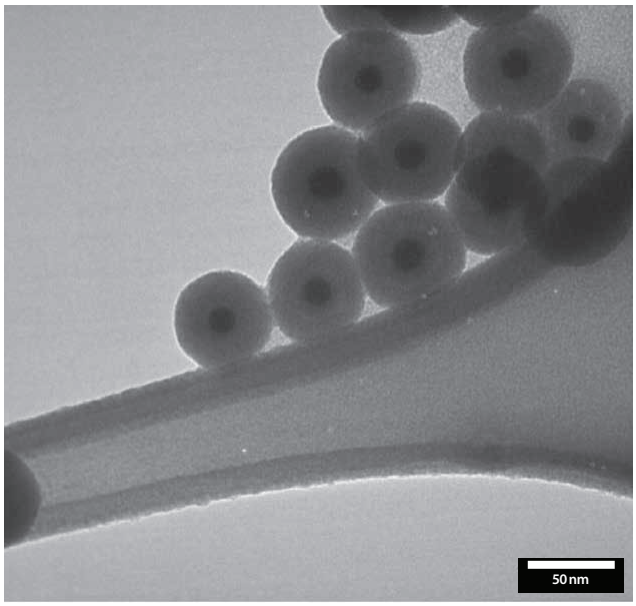


TEM: Quantum dots

Particles on carbon film

10 nm particles, 605 ITK carboxyl, unstained

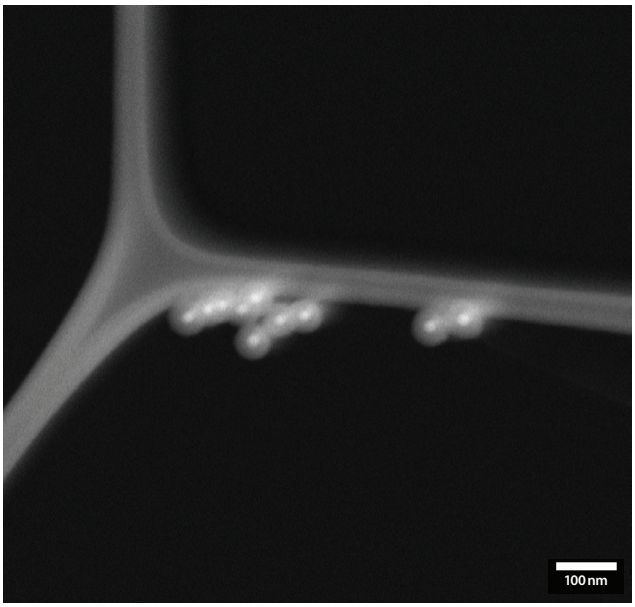
Sample courtesy of Jana Nebesářová, CSc., Biology Centre CAS



TEM: Silica-Coated Gold

Particles on carbon film

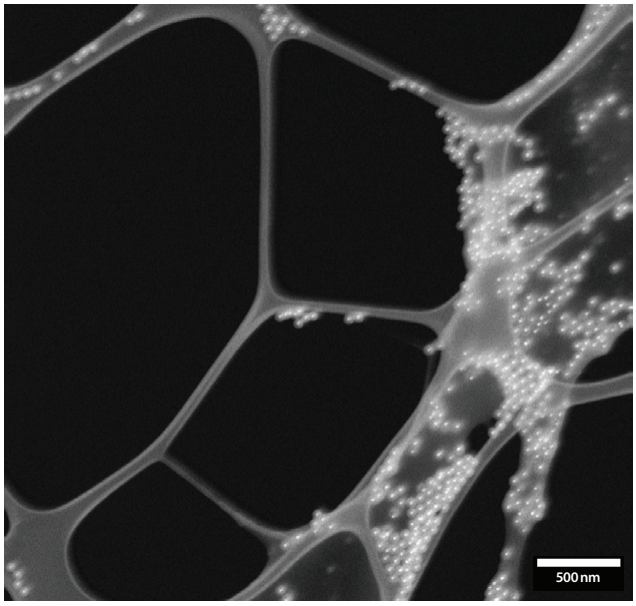
Gold colloids with 20 nm silica shell



SEM: Silica-Coated Gold

Particles on carbon film

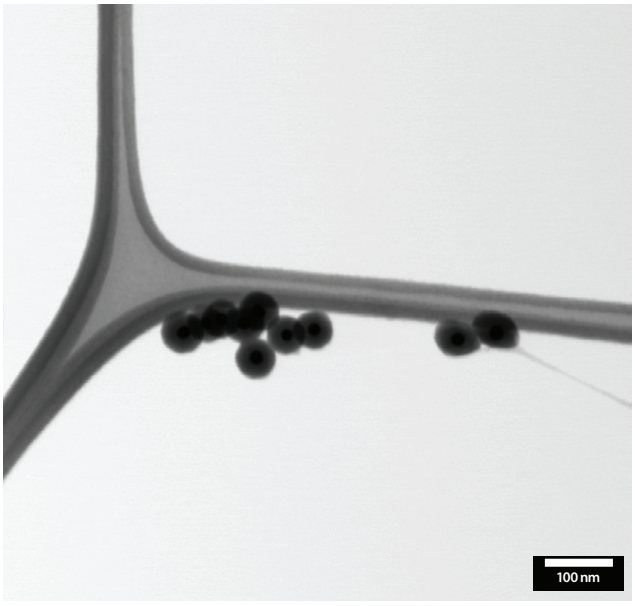
BSE. Gold colloids with 20 nm silica shell



SEM: Silica-Coated Gold

Particles on carbon film

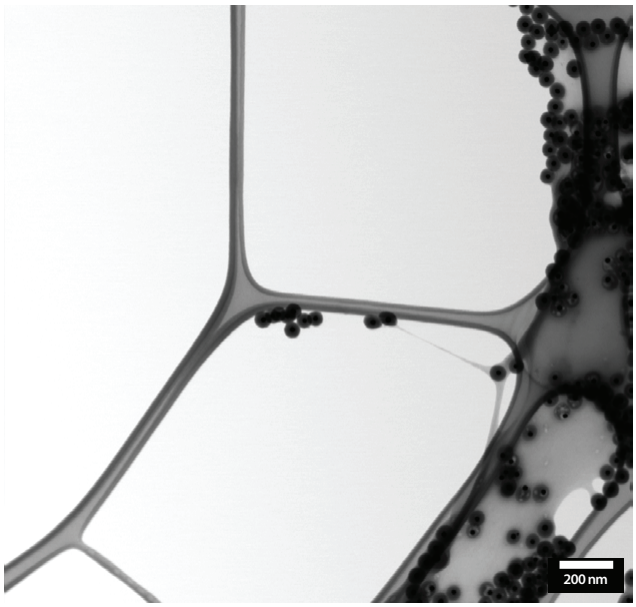
BSE. Gold colloids with 20 nm silica shell



STEM 15 kV: Silica-Coated Gold

Particles on carbon film

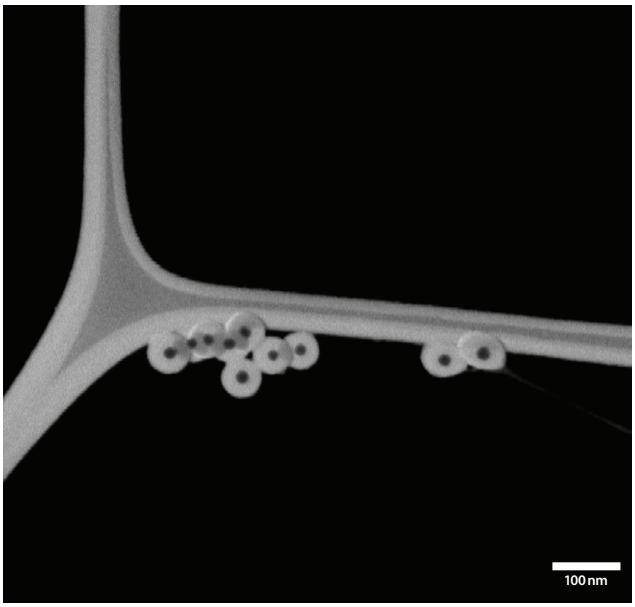
Gold colloids with 20 nm silica shell



STEM 15 kV: Silica-Coated Gold

Particles on carbon film

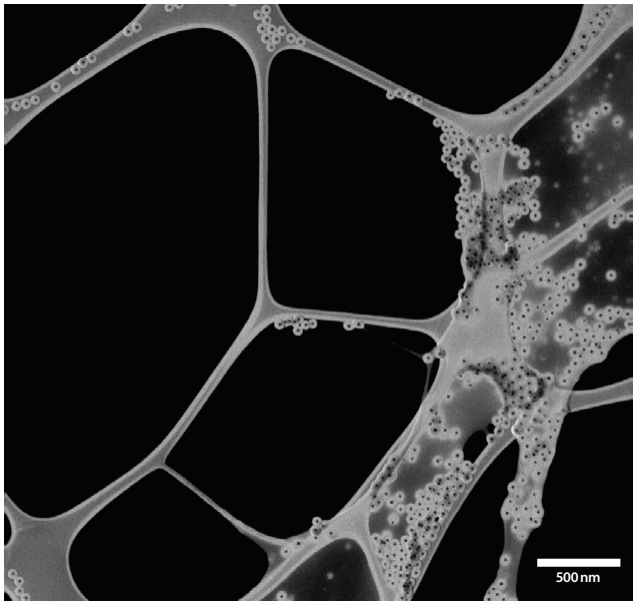
Gold colloids with 20 nm silica shell



STEM 15 kV: Silica-Coated Gold

Particles on carbon film

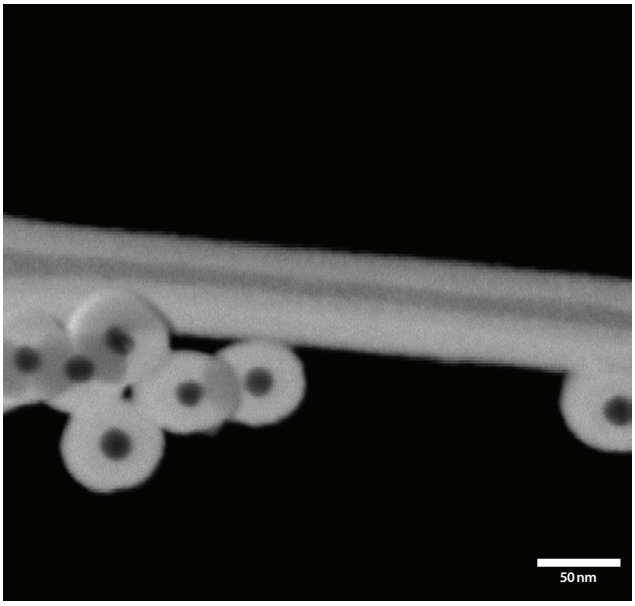
Dark field; Gold colloids with 20 nm silica shell



STEM 15 kV: Silica-Coated Gold

Particles on carbon film

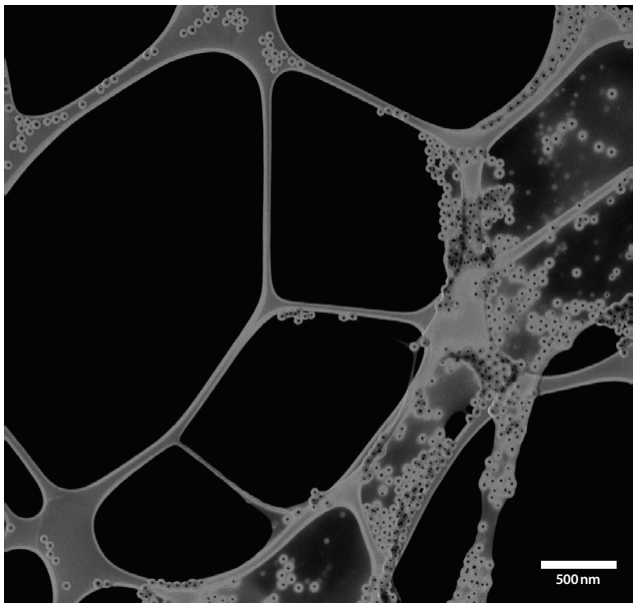
Dark field; Gold colloids with 20 nm silica shell



STEM 15 kV: Silica-Coated Gold

Particles on carbon film

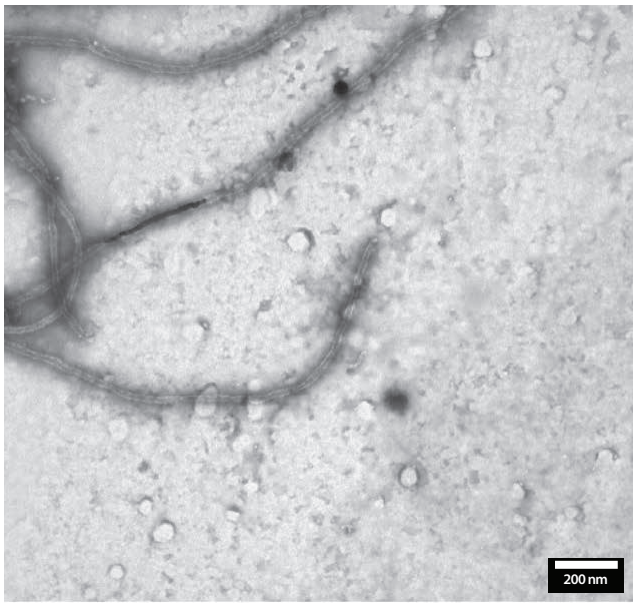
Dark field; Gold colloids with 20 nm silica shell



STEM 15 kV: Silica-Coated Gold

Particles on carbon film

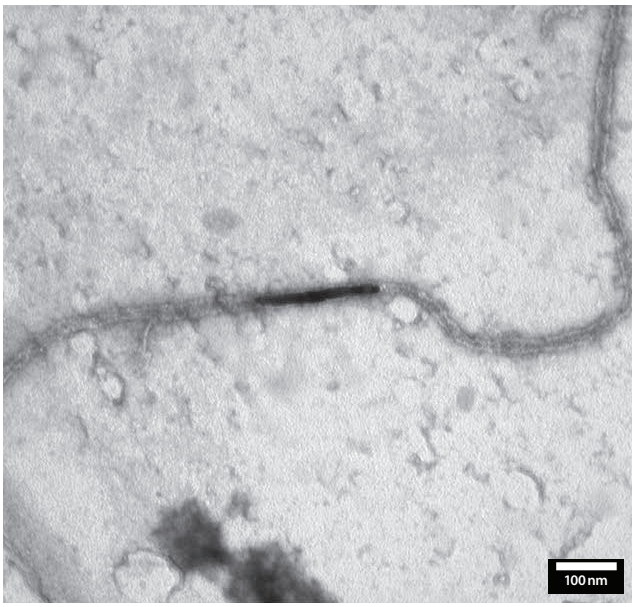
Dark field; Gold colloids with 20 nm silica shell



TEM: Au Nanowires Inside Microtubules

Particles on carbon film

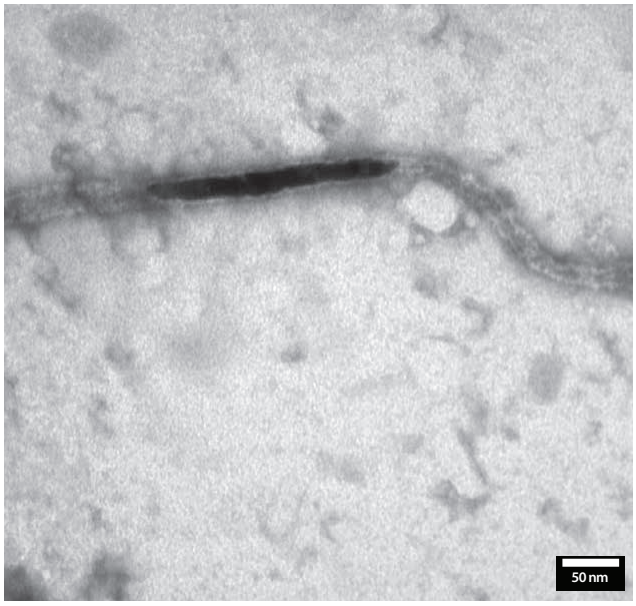
0.75 % UF stained gold nanowires inside microtubules



TEM: Au Nanowires Inside Microtubules

Particles on carbon film

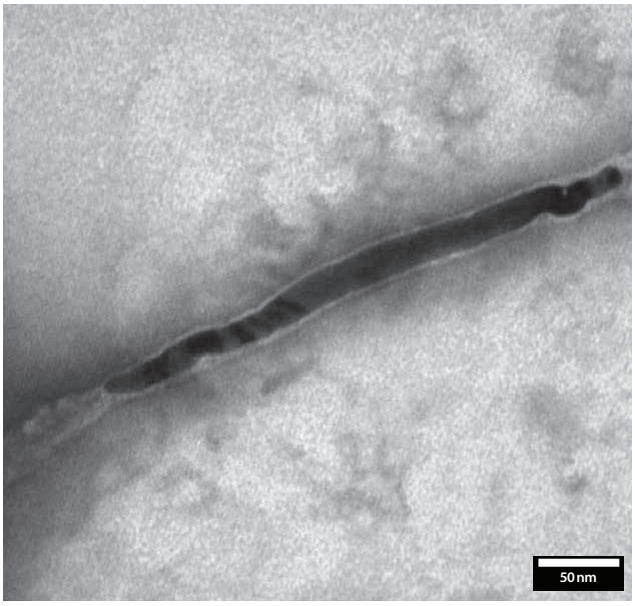
0.75 % UF stained gold nanowires inside microtubules



TEM: Au Nanowires Inside Microtubules

Particles on carbon film

0.75 % UF stained gold nanowires inside microtubules

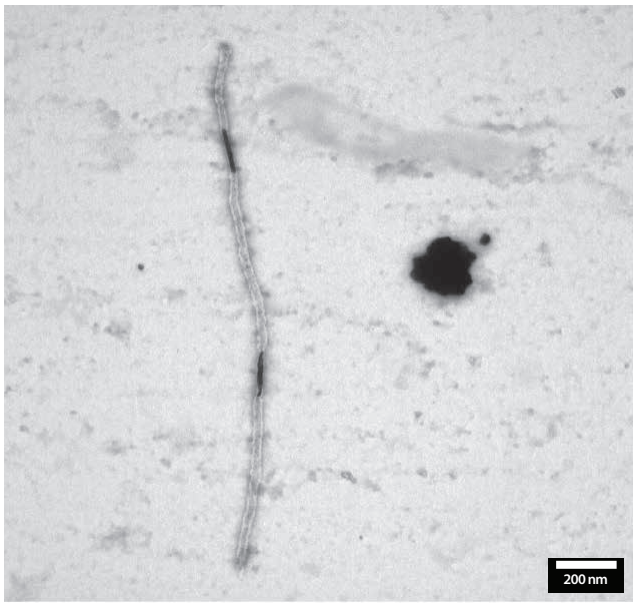


TEM: Au Nanowires Inside Microtubules

Particles on carbon film

0.75 % UF stained gold nanowires inside microtubules

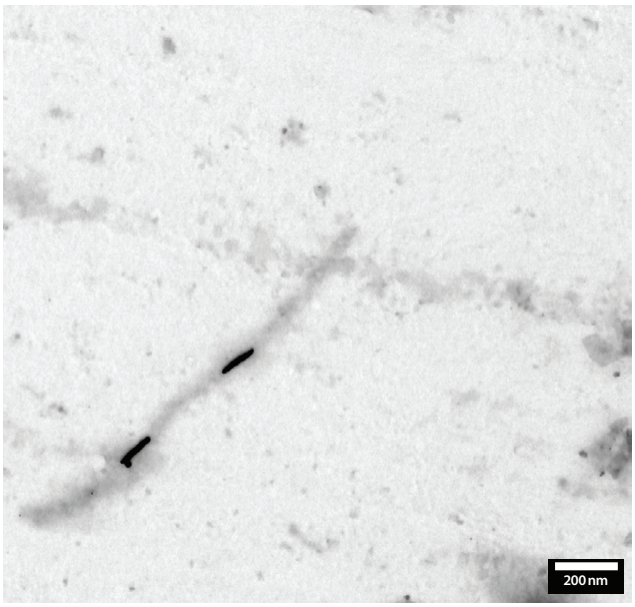
Sample courtesy of Foram Joshi,Ph.D., TUD



TEM: Au Nanowires in Protein Tubes

Particles on carbon film

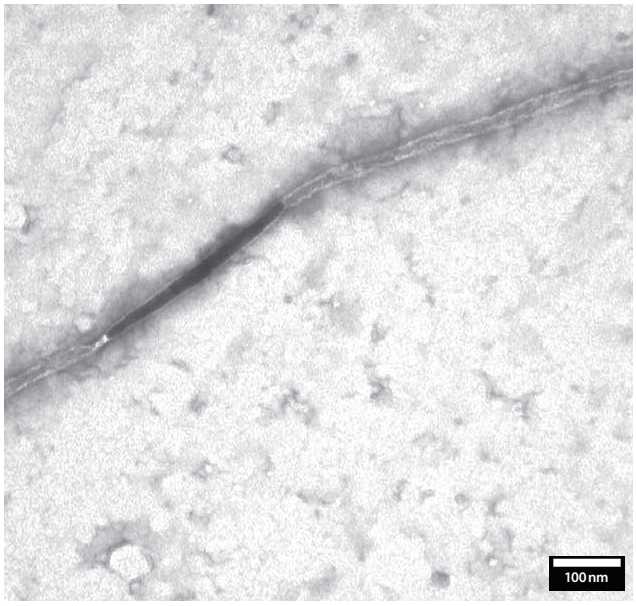
0.08% UF stained gold nanowires inside microtubules



STEM 15 kV: Au Nanowires in Protein Tubes

Particles on carbon film

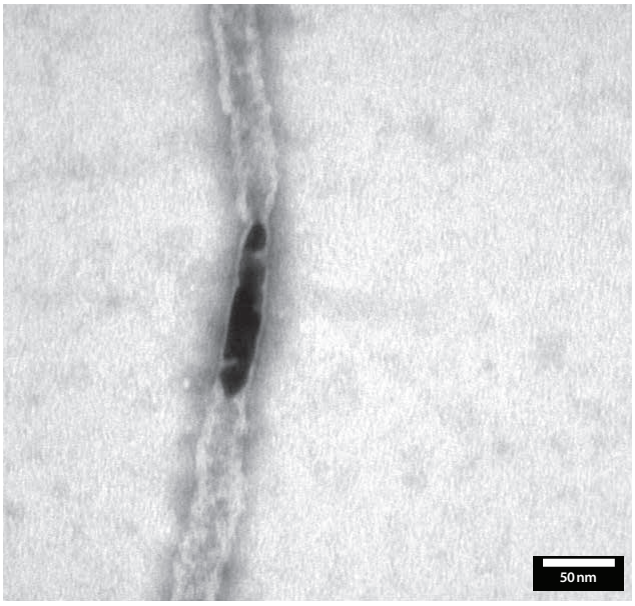
Unstained gold nanowires inside microtubules



TEM: Au Nanowires in Protein Tubes

Particles on carbon film

0.75 % UF stained gold nanowires inside microtubules

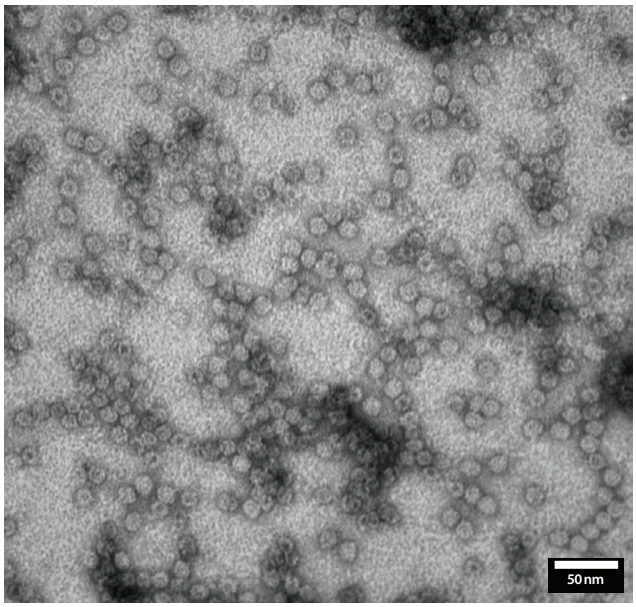


TEM: Au Nanowires in Protein Tubes

Particles on carbon film

0.08% UF stained gold nanowires inside microtubules

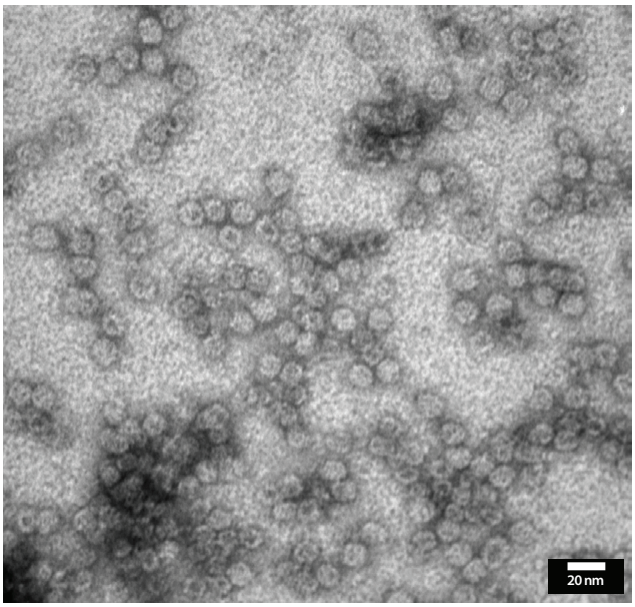
Sample courtesy of Foram Joshi,Ph.D., TUD



TEM: Ferritin

Particles on carbon film

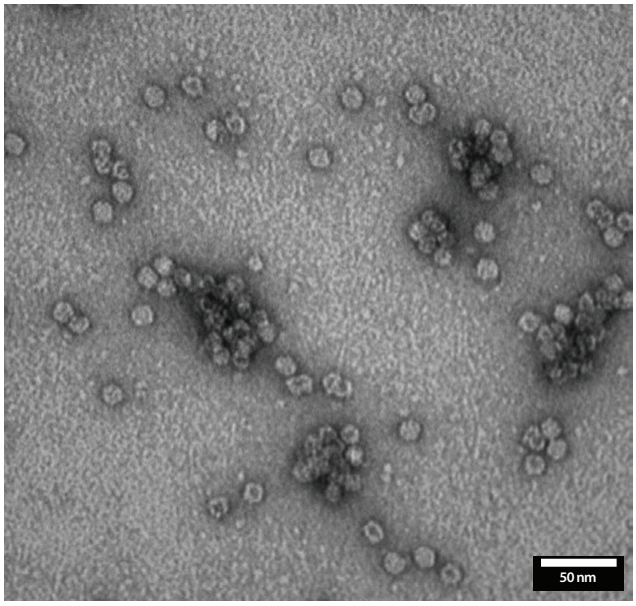
Stained UAc 0.5%



TEM: Ferritin

Particles on carbon film

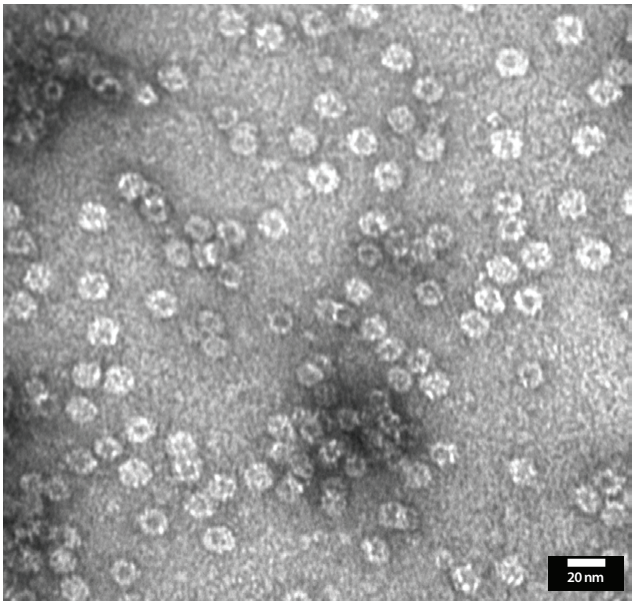
Stained UAc 0.5%



TEM: Ferritin

Particles on carbon film

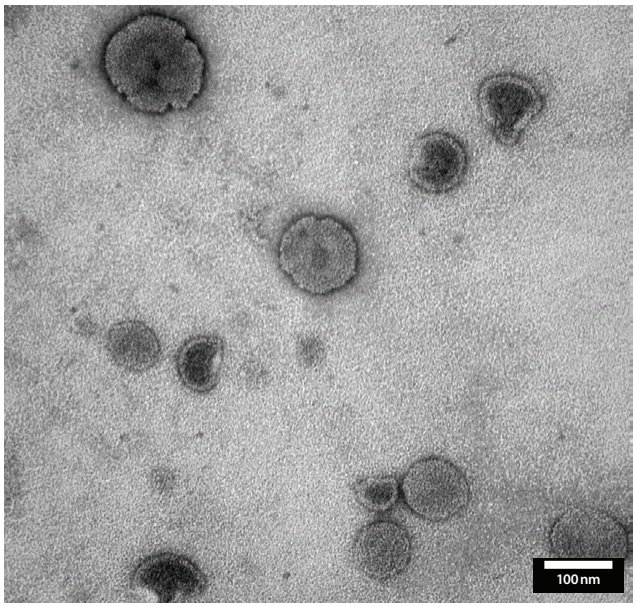
Stained UAc 0.5%



TEM: Ferritin

Particles on carbon film

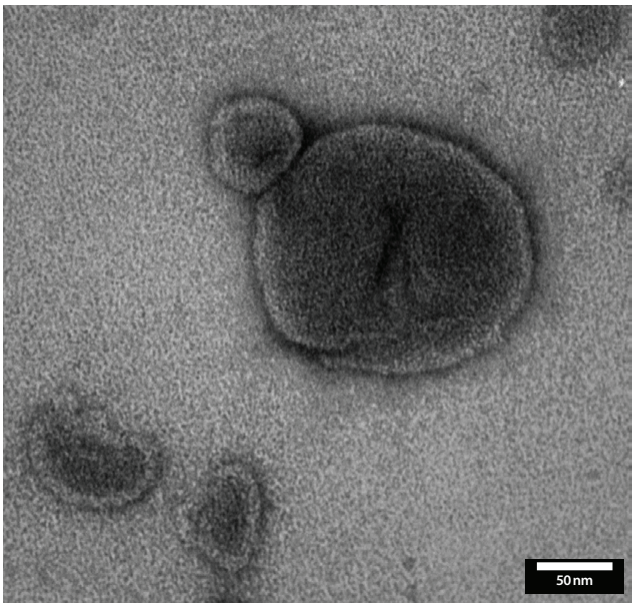
Stained UAc 0.5%



TEM: Liposomes

Particles on carbon film

Stained UAc 0.5%

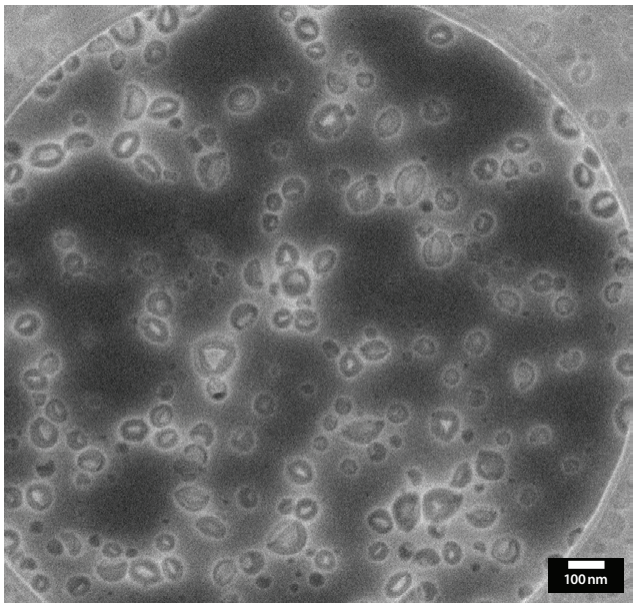


TEM: Liposomes

Particles on carbon film

Stained UAc 0.5%

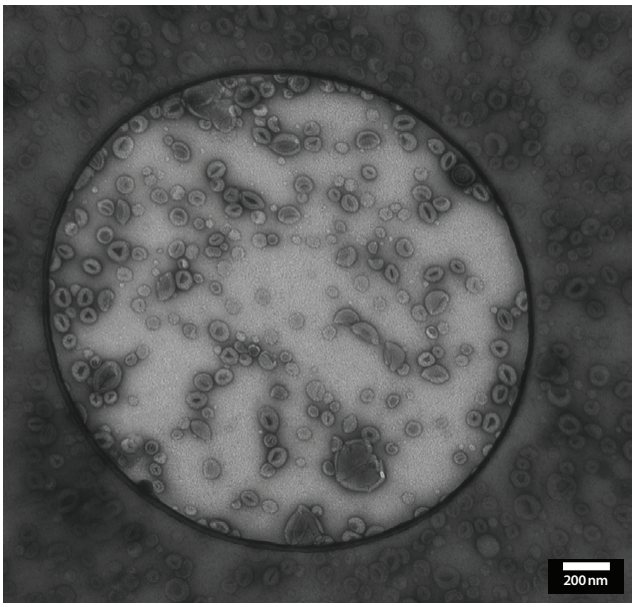
Sample courtesy of Assoc. Prof. Ilona Bytešníková, Ph.D., Mendelu, Brno



SEM: Liposomes

Particles on carbon film

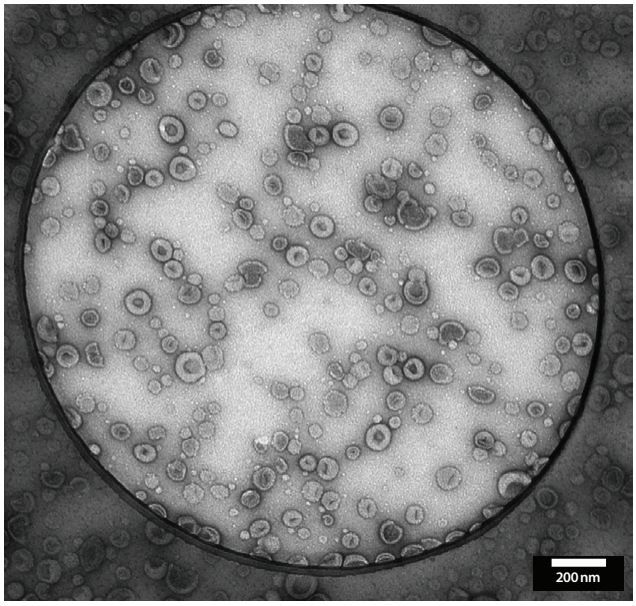
Stained UAc 2%



TEM: Liposomes

Particles on carbon film

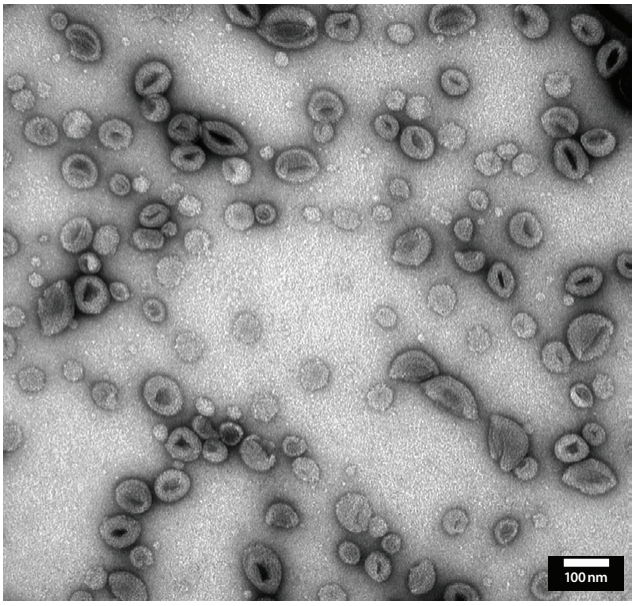
Stained UAc 2%



TEM: Liposomes

Particles on carbon film

Stained UAc 2%

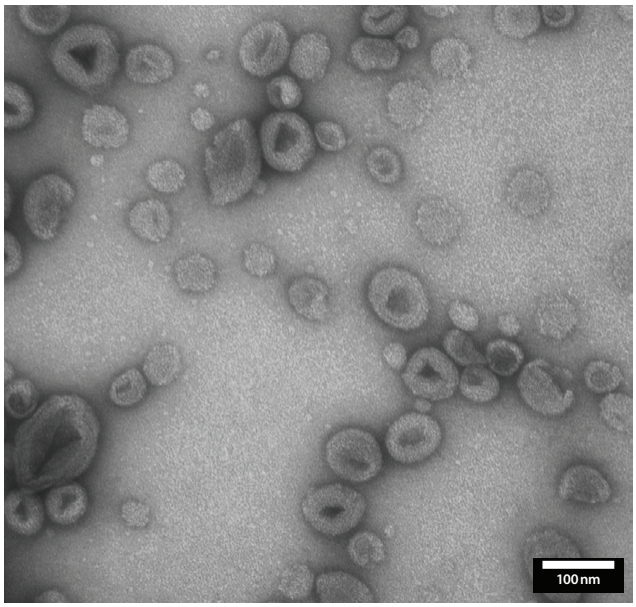


TEM: Liposomes

Particles on carbon film

Stained UAc 2%

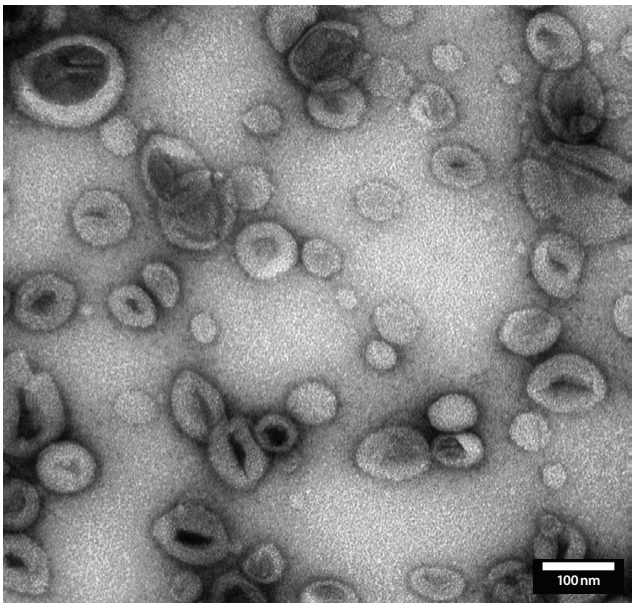
Sample courtesy of Assoc. Prof. Ilona Bytešníková, Ph.D., Mendelu, Brno



SEM: Liposomes

Particles on carbon film

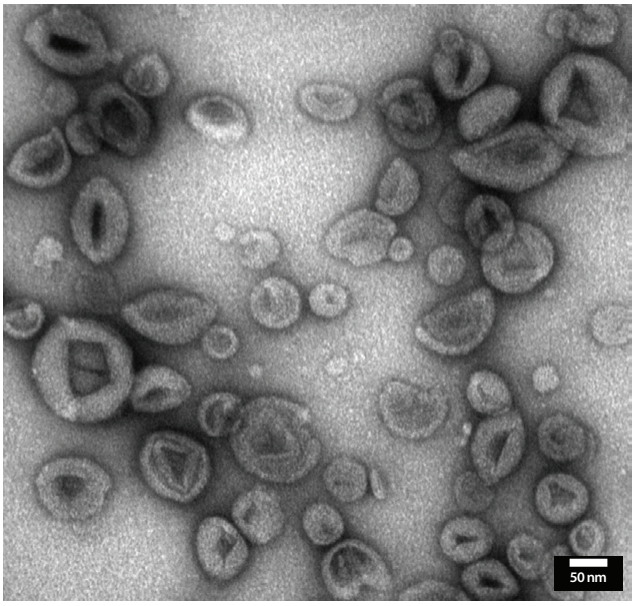
Stained UAc 2%



TEM: Liposomes

Particles on carbon film

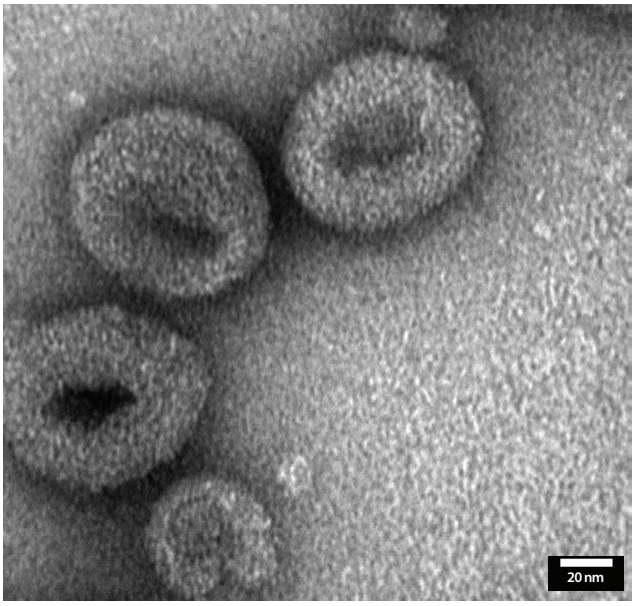
Stained UAc 2%



TEM: Liposomes

Particles on carbon film

Stained UAc 2%

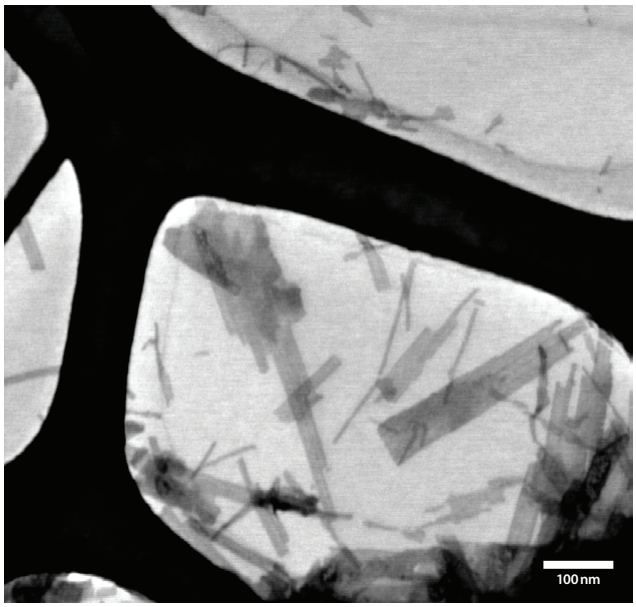


TEM: Liposomes

Particles on carbon film

Stained UAc 2%

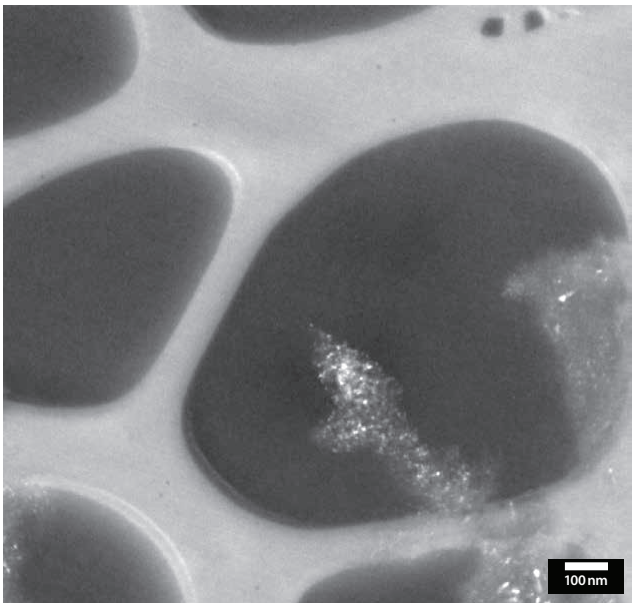
Sample courtesy of Assoc. Prof. Ilona Bytešníková, Ph.D., Mendelu, Brno



STEM 15 kV: Reduced Graphene Oxide with Zn Nanoparticles

Particles on carbon film

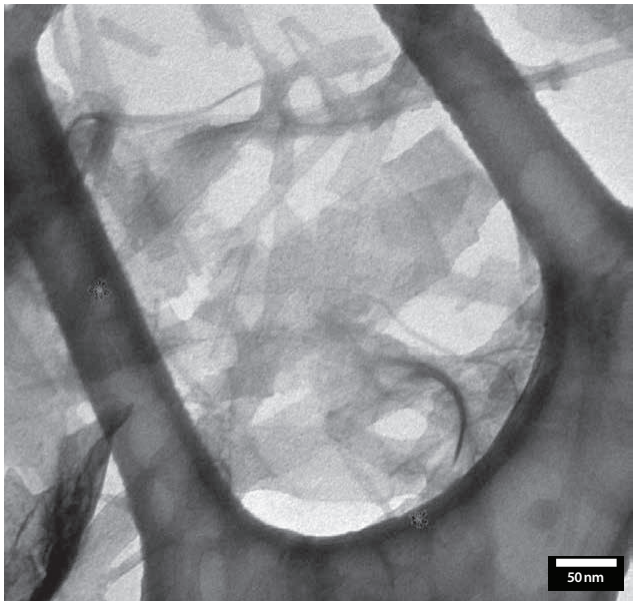
Point of interest: contrast between zinc nanoparticles and carbon material



TEM DF: Reduced Graphene Oxide with Zn Nanoparticles

Particles on carbon film

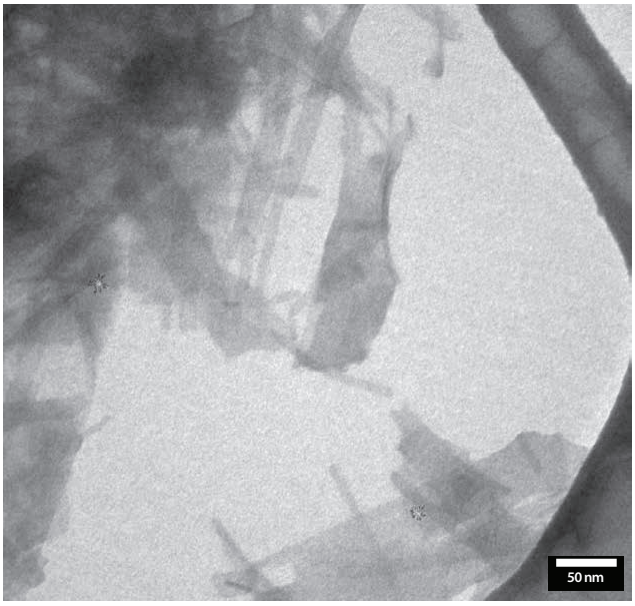
Point of interest: contrast between zinc nanoparticles and carbon material



TEM: Reduced Graphene Oxide with Zn Nanoparticles

Particles on carbon film

Point of interest: contrast between zinc nanoparticles and carbon material

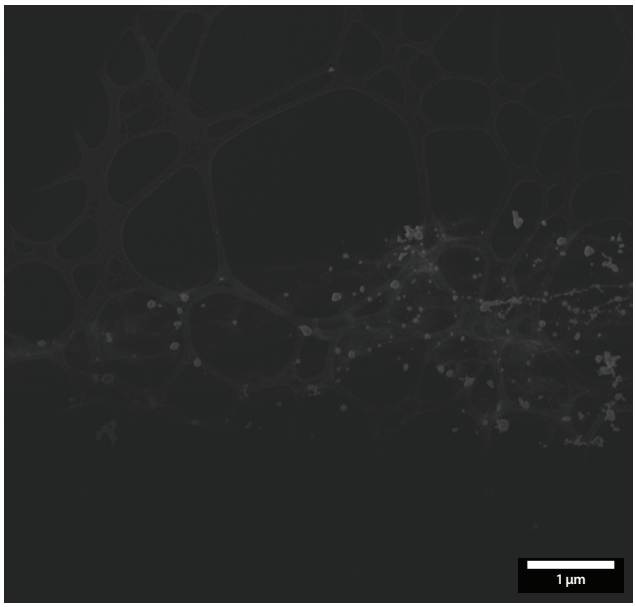


TEM: Reduced Graphene Oxide with Zn Nanoparticles

Particles on carbon film

Point of interest: contrast between zinc nanoparticles and carbon material

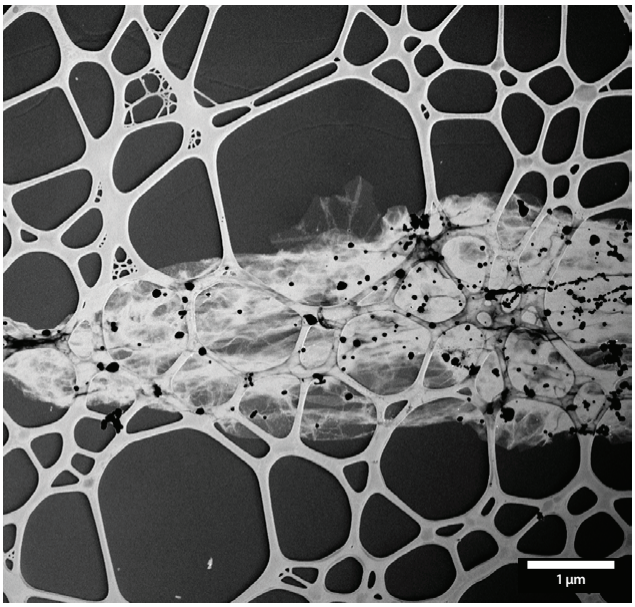
Sample courtesy of Assoc. Prof. Ilona Bytešníková, Ph.D., Mendelu, Brno



STEM 15 kV: Reduced Graphene Oxide with AuAg Nanoparticles

Particles on carbon film

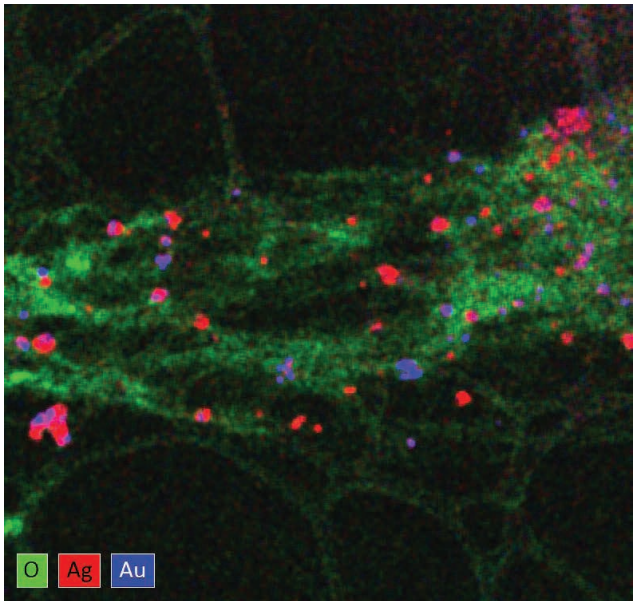
Dark field; Point of interest: Material tests electrode sensitivity



STEM 15 kV: Reduced Graphene Oxide with AuAg Nanoparticles

Particles on carbon film

Dark field; Point of interest: Material tests electrode sensitivity

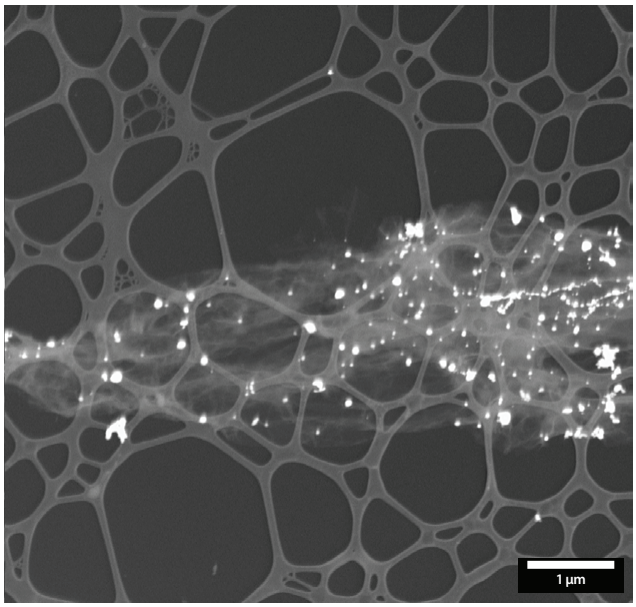


EDS: Reduced Graphene Oxide with AuAg Nanoparticles

Particles on carbon film

Point of interest: Material tests electrode sensitivity

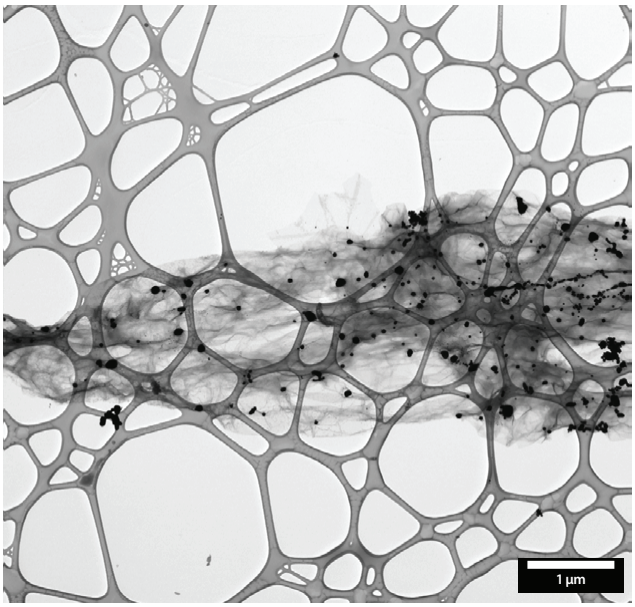
Sample courtesy of Assoc. Prof. Ilona Bytešníková, Ph.D., Mendelu, Brno



SEM: Reduced Graphene Oxide with AuAg Nanoparticles

Particles on carbon film

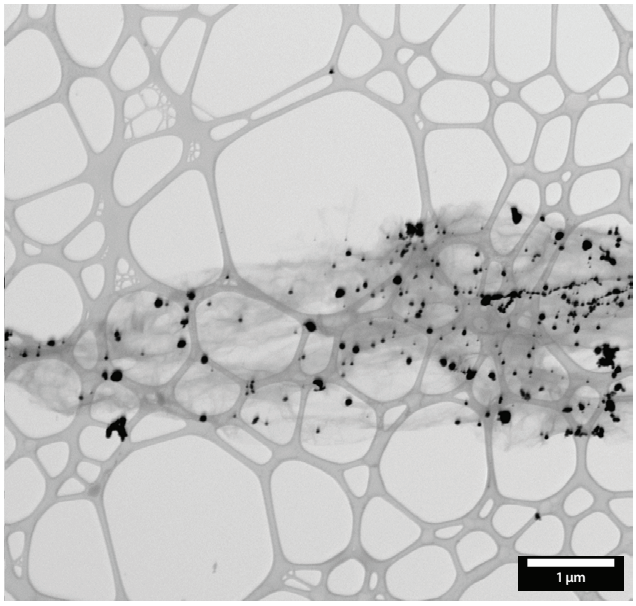
Point of interest: Material tests electrode sensitivity



STEM 15 kV: Reduced Graphene Oxide with AuAg Nanoparticles

Particles on carbon film

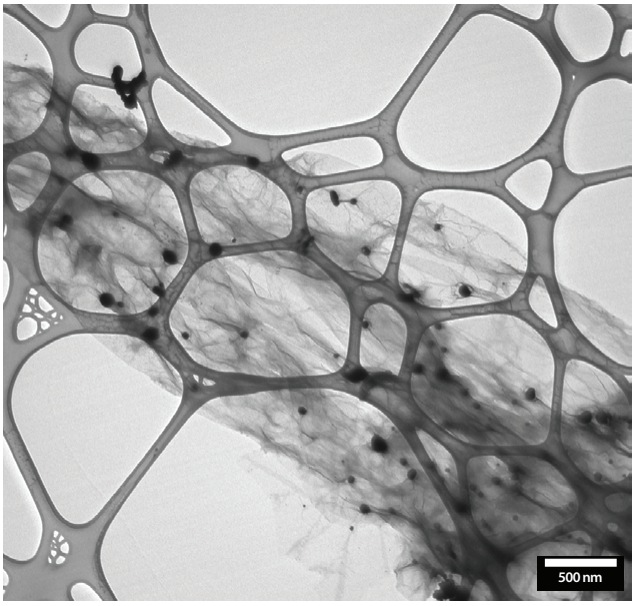
Point of interest: Material tests electrode sensitivity



SEM: Reduced Graphene Oxide with AuAg Nanoparticles

Particles on carbon film

Inverted image. Point of interest: Material tests electrode sensitivity

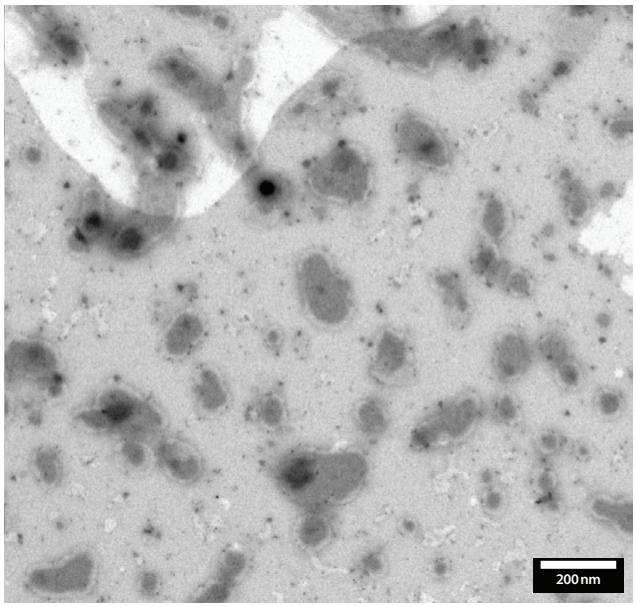


TEM: Reduced Graphene Oxide with AuAg Nanoparticles

Particles on carbon film

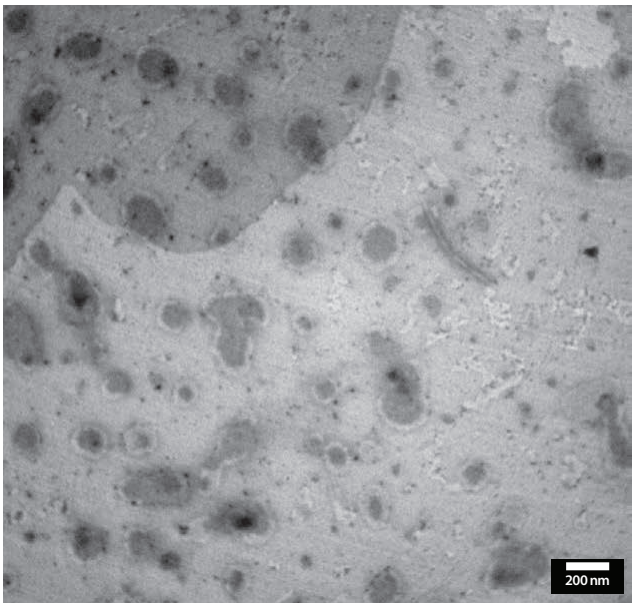
Point of interest: Material tests electrode sensitivity

Sample courtesy of Assoc. Prof. Ilona Bytešníková, Ph.D., Mendelu, Brno



TEM: Lipid Nanoparticles with Chelated Gd

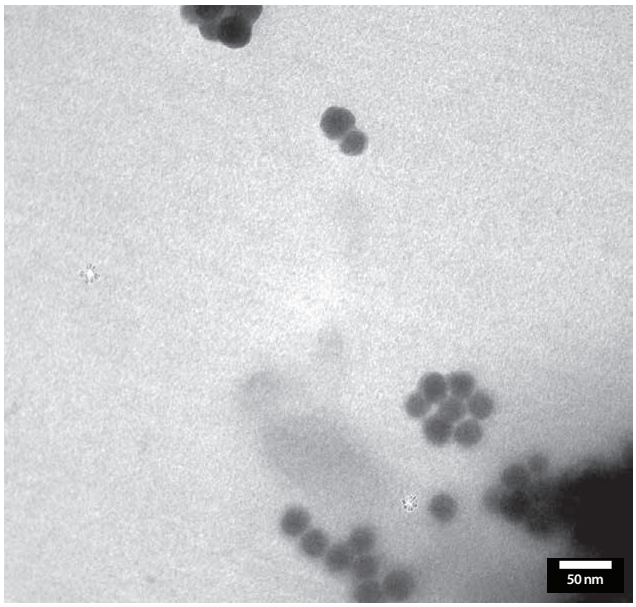
Particles on carbon film



TEM: Lipid Nanoparticles with Chelated Gd

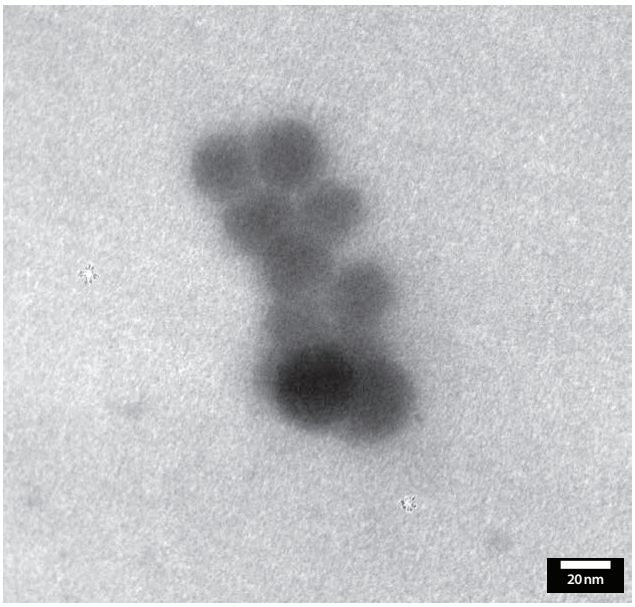
Particles on carbon film

Sample courtesy of Assoc. Prof. Ilona Bytešníková, Ph.D., Mendelu, Brno



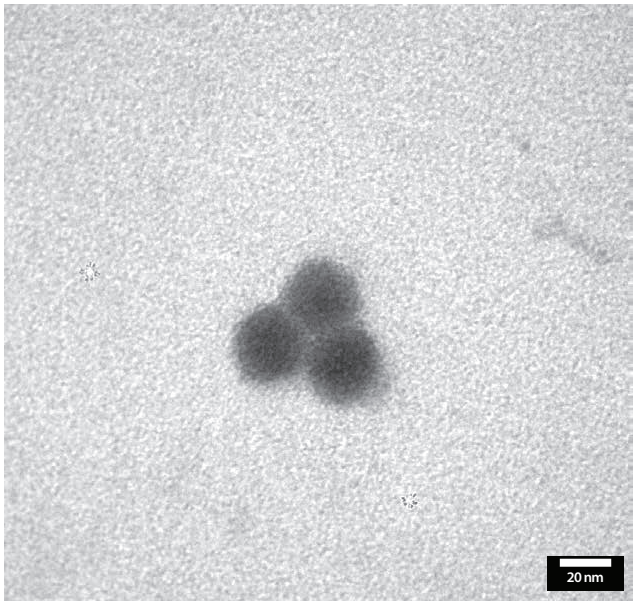
TEM: Qdots

Particles on carbon film



TEM: Qdots

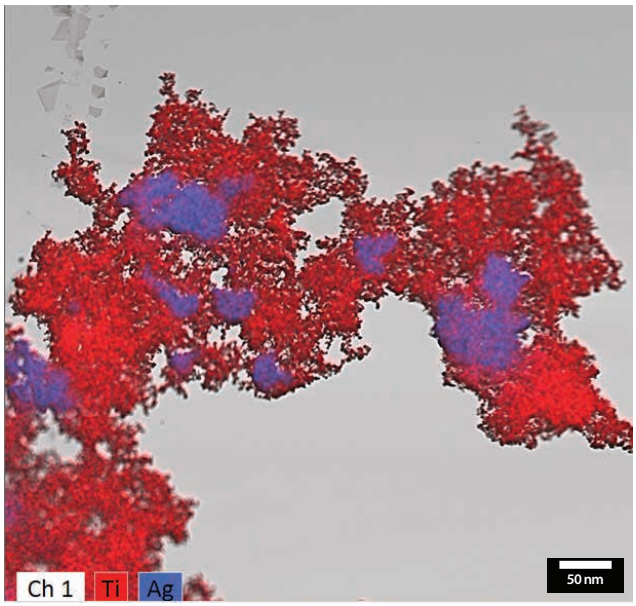
Particles on carbon film



TEM: Carbon Quantum Dots

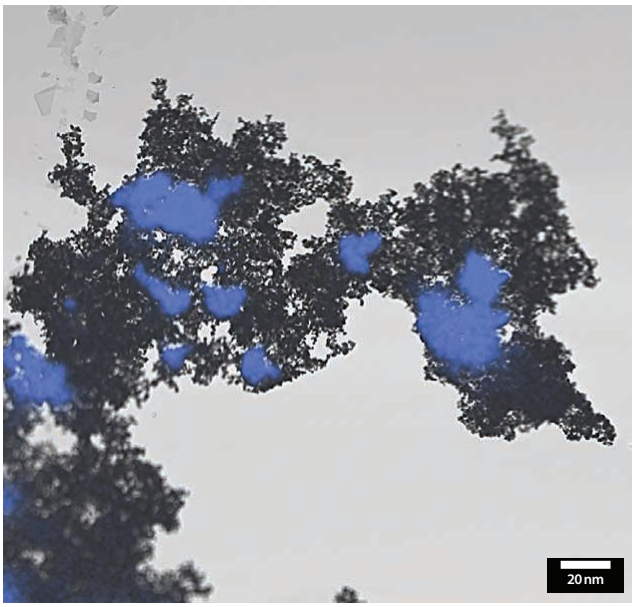
Particles on carbon film

Sample courtesy of Ing. Marta Férová, Ph.D., Faculty of Science University of Ostrava



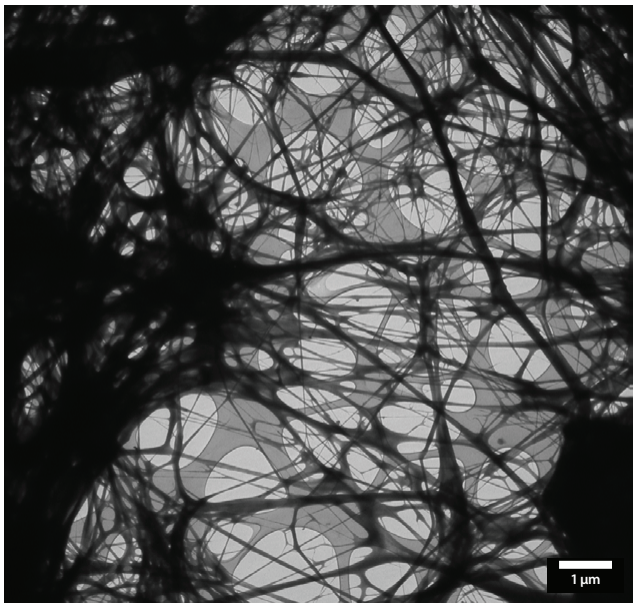
EDS: Ti + Ag NPs

STEM mapping



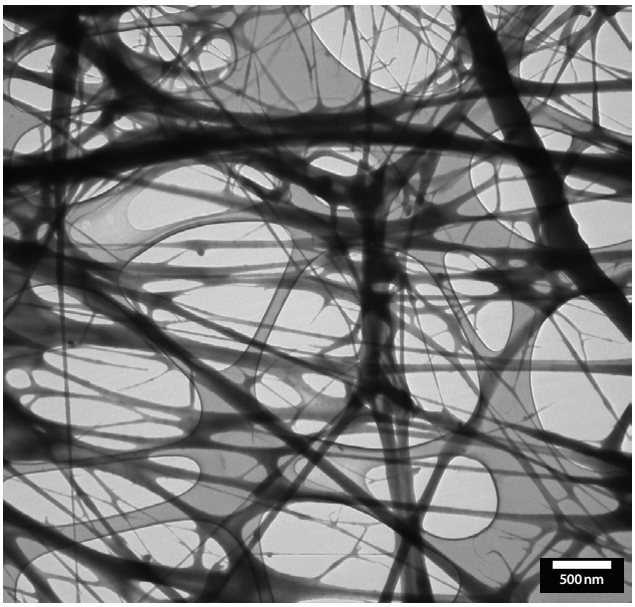
EDS: Ti + Ag NPs

STEM mapping



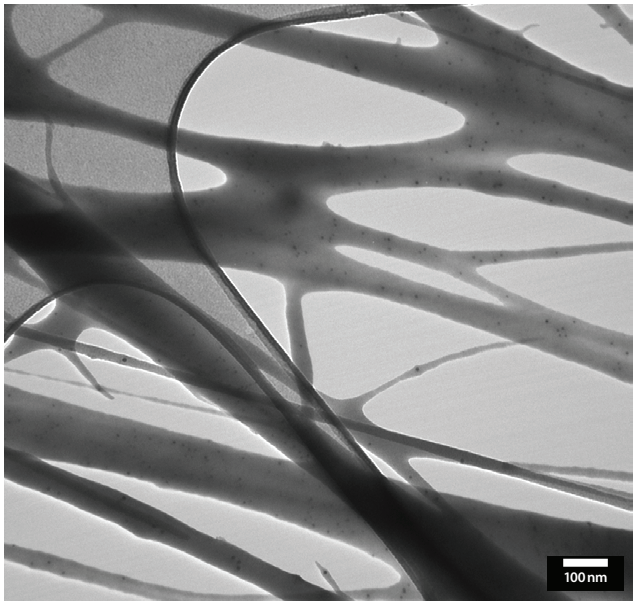
TEM: Cellulose with Borone Nitride Nanoparticles

Particles on carbon film, unstained



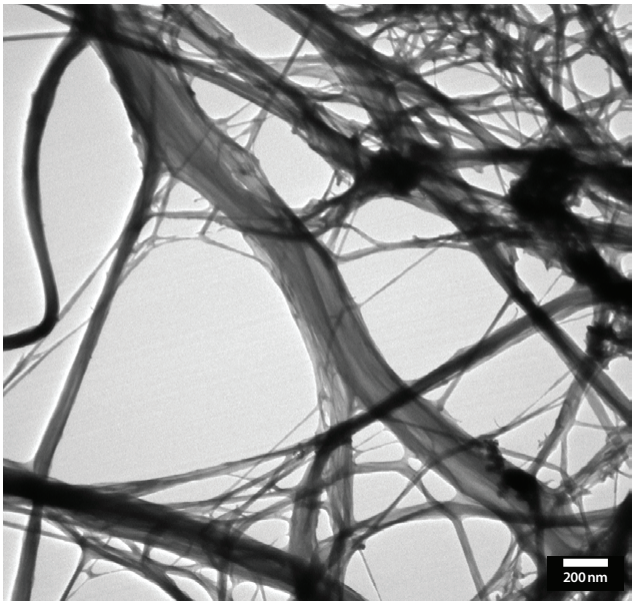
TEM: Cellulose with Borone Nitride Nanoparticles

Particles on carbon film, unstained



TEM: Cellulose with Borone Nitride Nanoparticles

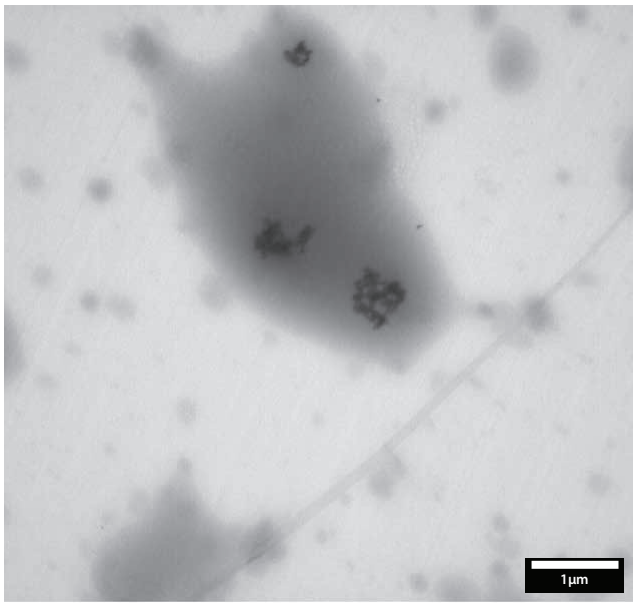
Particles on carbon film, unstained



TEM: Cellulosic Microfibres Defibrillated into Nanometric fibrils

Particles on carbon film, unstained

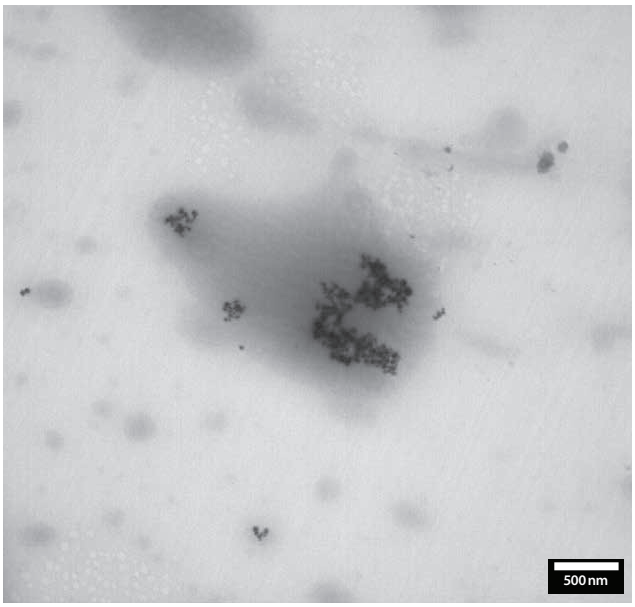
Sample courtesy of Ing. Luca Bertolla, Ph.D., Institute ofPhysics of Materials (IPM)



TEM: $TiSiO_4$ Nanoparticles

Particles on carbon film

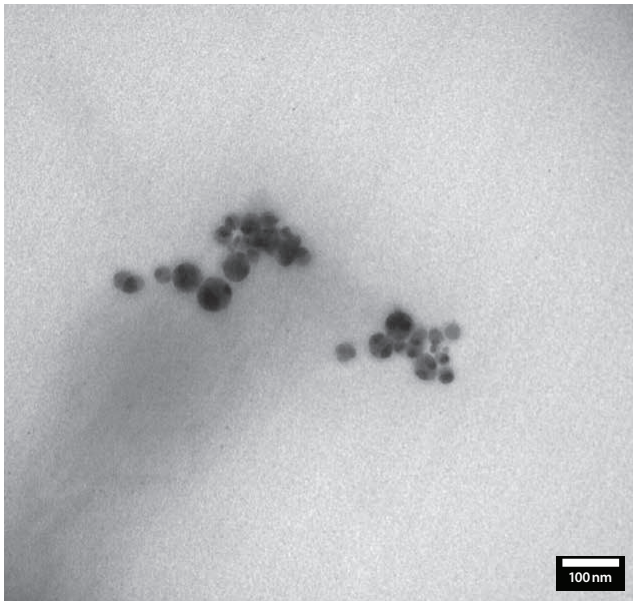
30 nm nanoparticles in wheat flour



TEM: $TiSiO_4$ Nanoparticles

Particles on carbon film

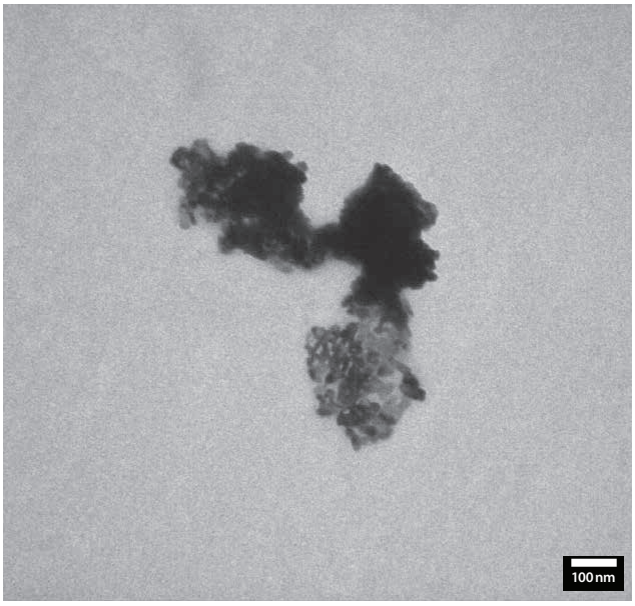
30 nm nanoparticles in wheat flour



TEM: $TiSiO_4$ Nanoparticles

Particles on carbon film

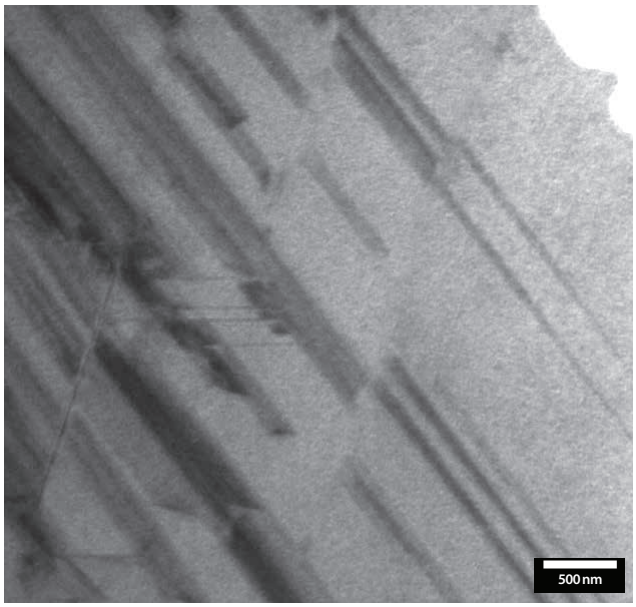
30 nm nanoparticles in wheat flour



TEM: ZnO Nanoparticles

Particles on carbon film

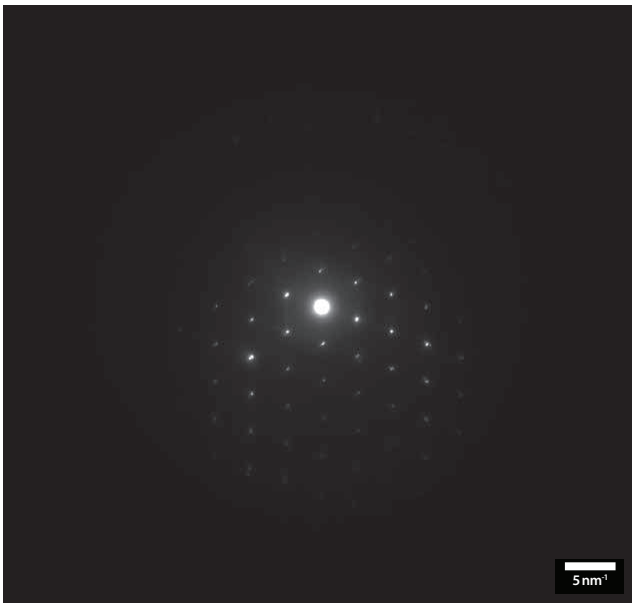
Nanoparticles in yoghurt



TEM: GaN on SiC

FIB lamela

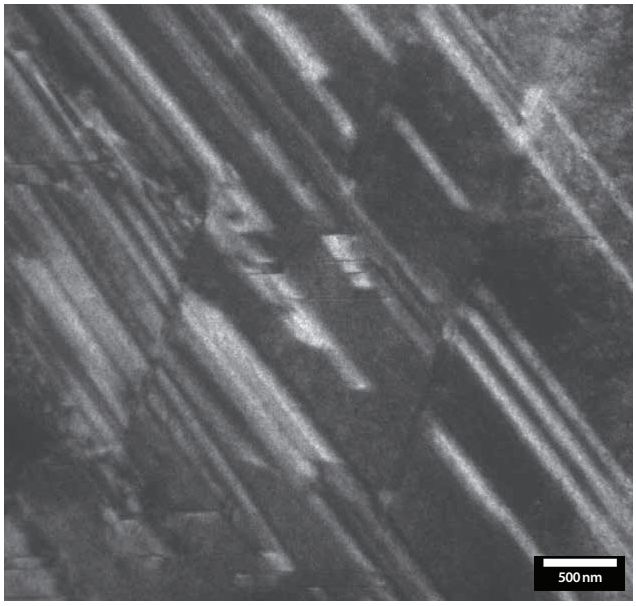
Bright field; zincblende GaN on zincblende SiC



ED: GaN on SiC

FIB lamela

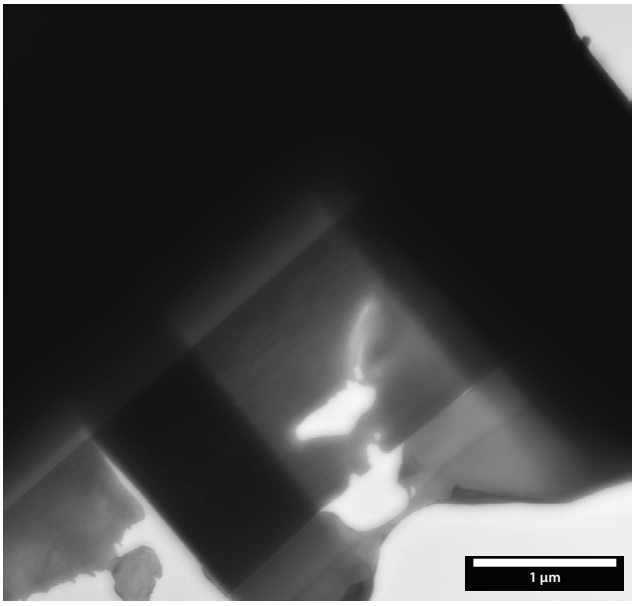
Corresponding diffraction



TEM: GaN on SiC

FIB lamela

Dark field; zincblende GaN on zincblende SiC

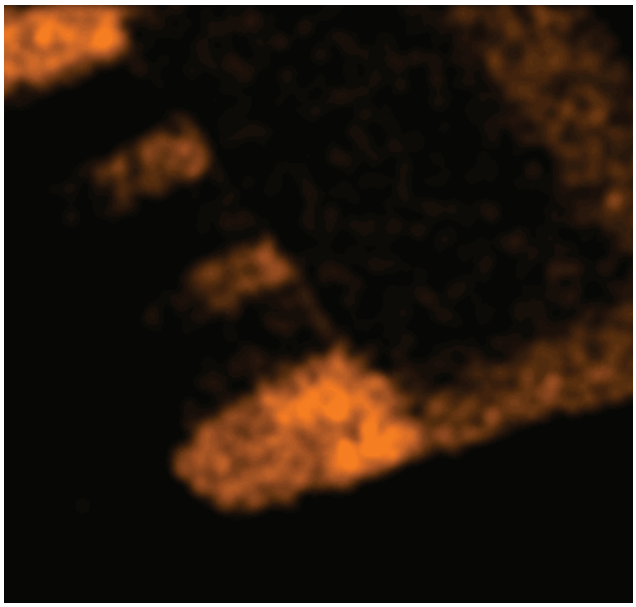


STEM: GaN on SiC

FIB lamela

Bright field; zincblende GaN on zincblende SiC

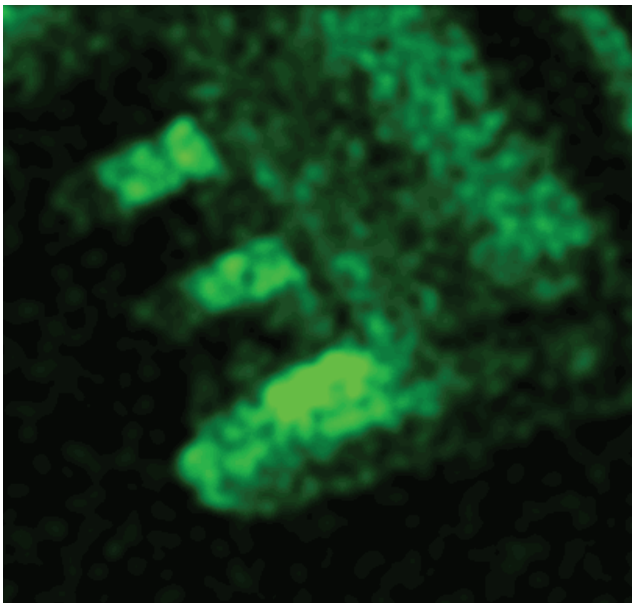
Sample prepared by ipm.cz



EDS: GaN on SiC

FIB lamela

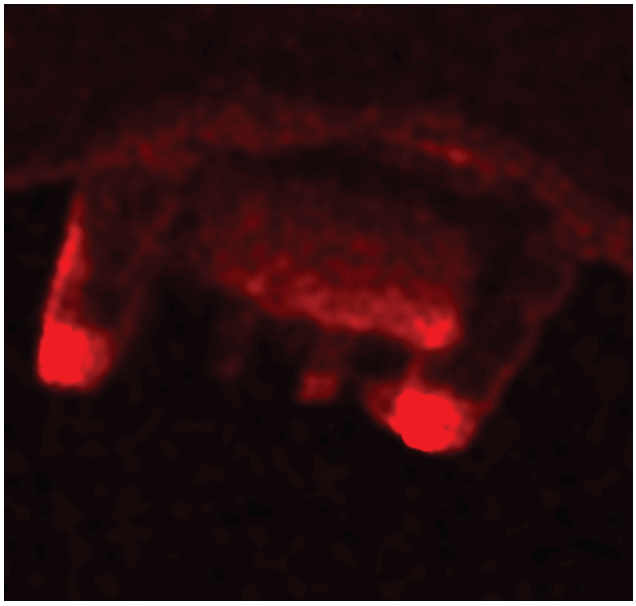
Ga mapping



EDS: GaN on SiC

FIB lamela

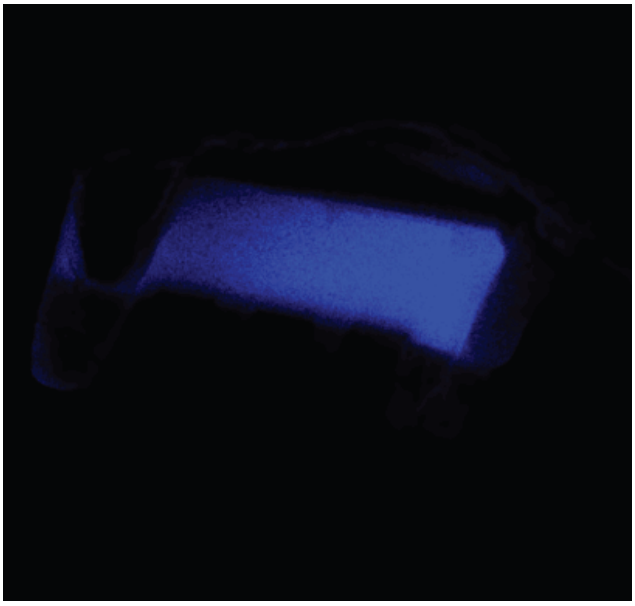
N mapping



EDS: GaN on SiC

FIB lamela

C mapping

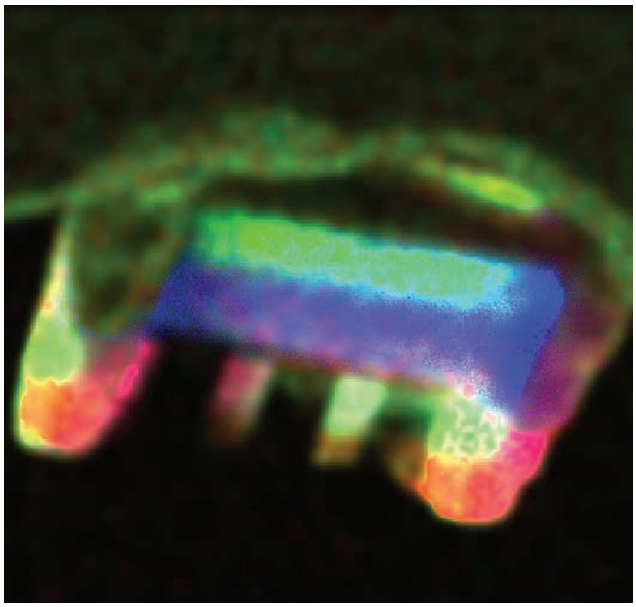


EDS: GaN on SiC

FIB lamela

Si mapping

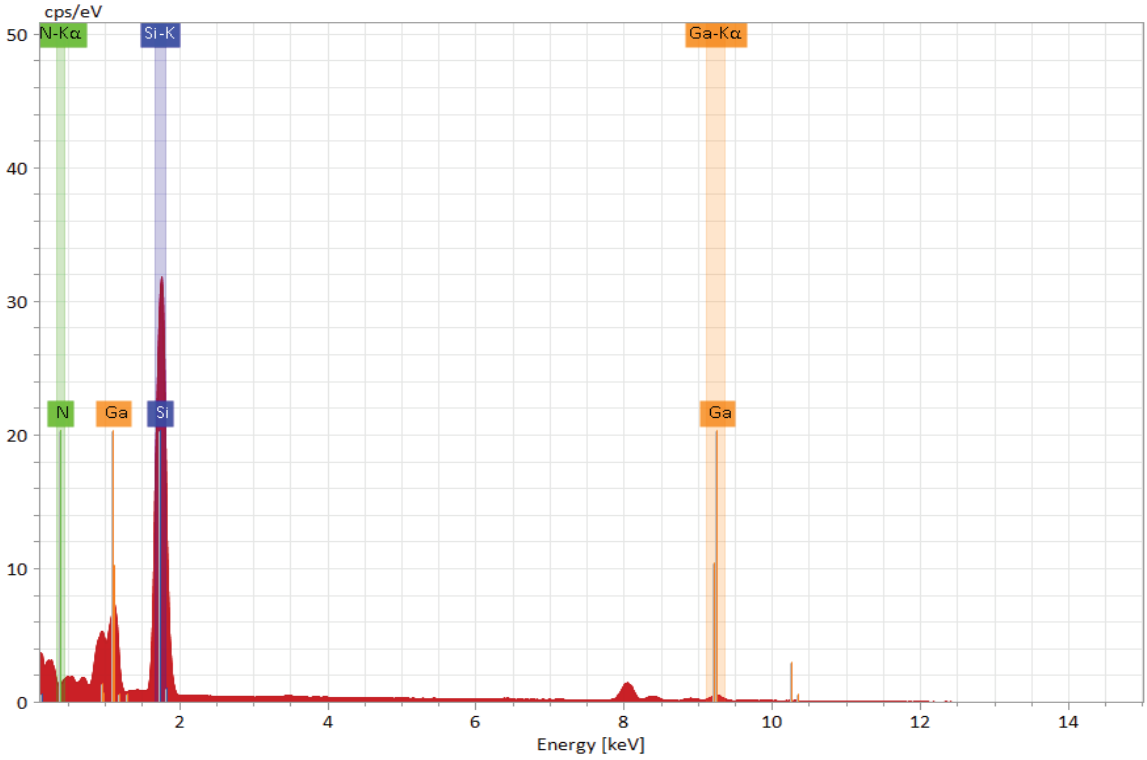
Sample prepared by ipm.cz



EDS: GaN on SiC

FIB lamela

Sample mapping

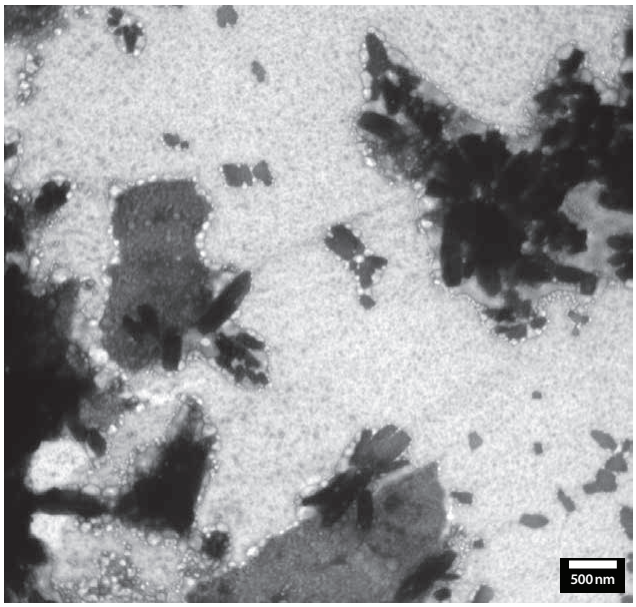


EDS: GaN on SiC

FIB lamela

EDS spectrum

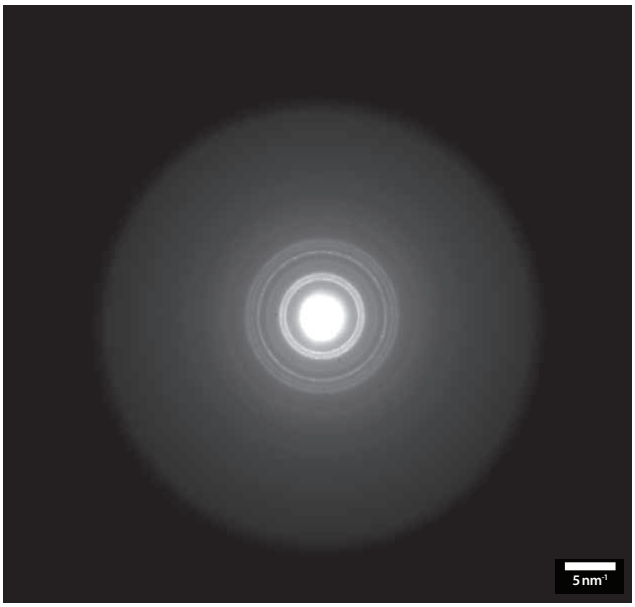
Sample prepared by ipm.cz



TEM: ZnO Nanoparticles

Particles on carbon film

Prepared from plant extract and $Zn(NO_3)_2$

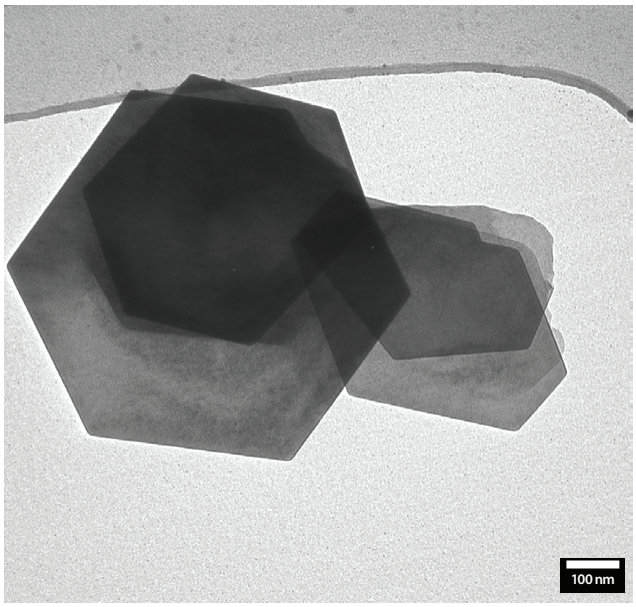


ED: ZnO Nanoparticles

Particles on carbon film

Prepared from plant extract and $Zn(NO_3)_2$

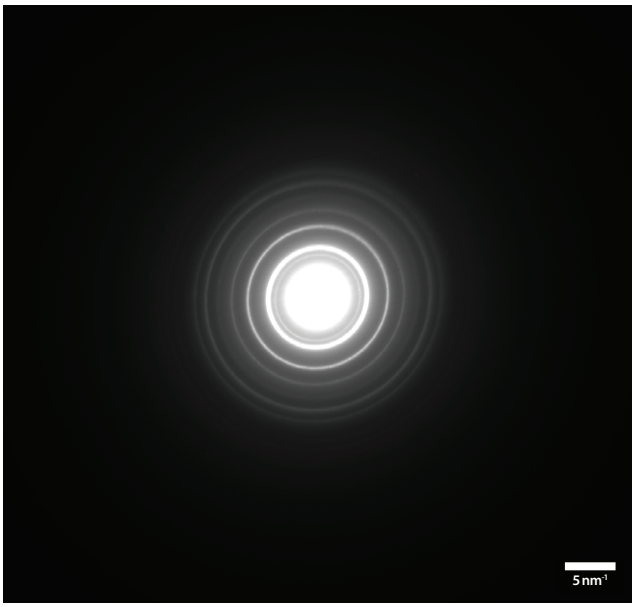
Sample courtesy of Ing. Marta Férová, Ph.D., Faculty of Science University of Ostrava



TEM: $Mg(OH)_2$ Hexagons

Particles on carbon film

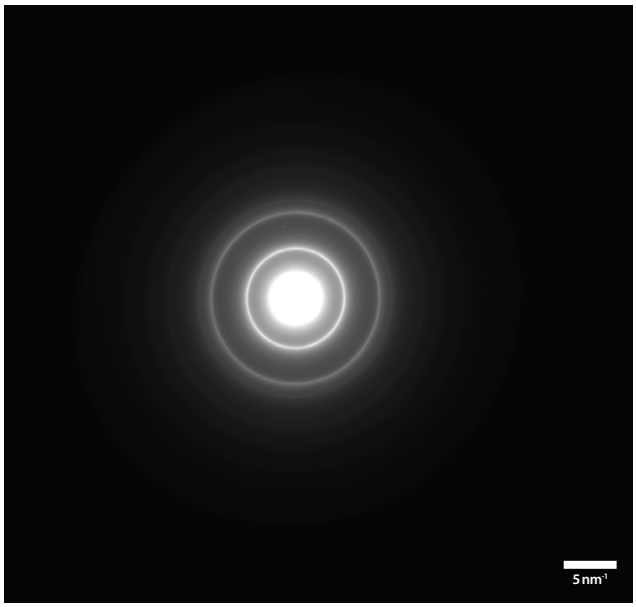
Fireretardant



ED: $Mg(OH)_2$ Hexagons

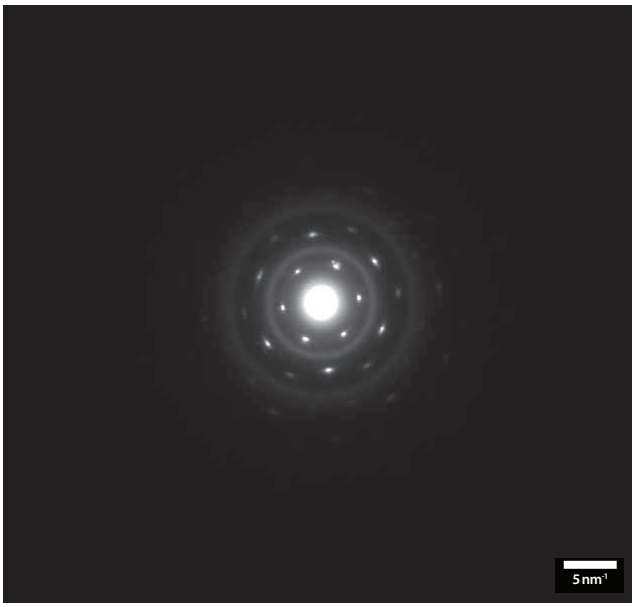
Particles on carbon film

Fireretardant



ED: Reduced Graphene Oxide with AuAg Nanoparticles

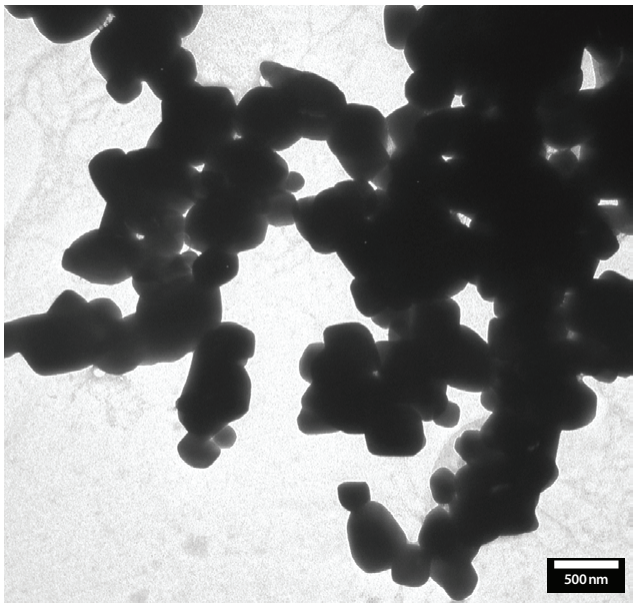
Particles on carbon film



ED: Reduced Graphene Oxide with Zn Nanoparticles

Particles on carbon film

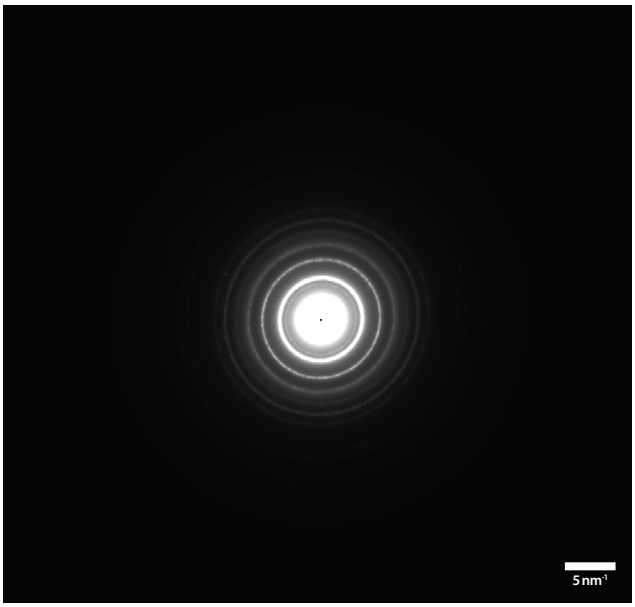
Sample courtesy of Assoc. Prof. Ilona Bytešníková, Ph.D., Mendelu, Brno



TEM: PVP coated MnO

Particles on carbon film

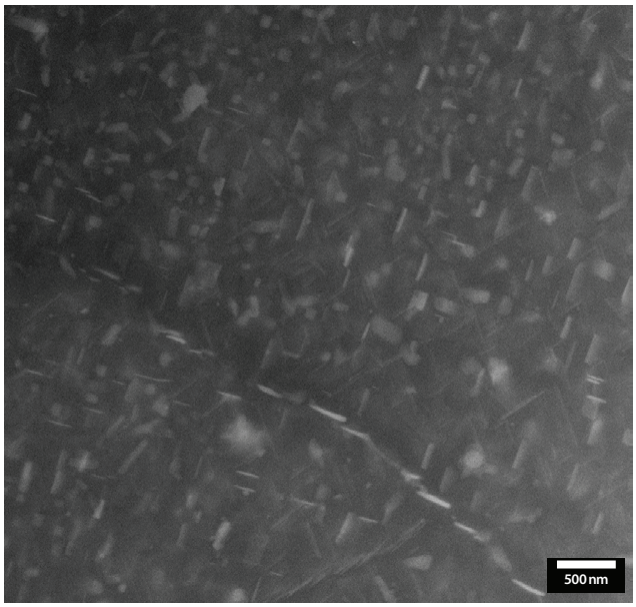
Point of interest: particle distribution in the nanorange



ED: PVP coated MnO

Particles on carbon film

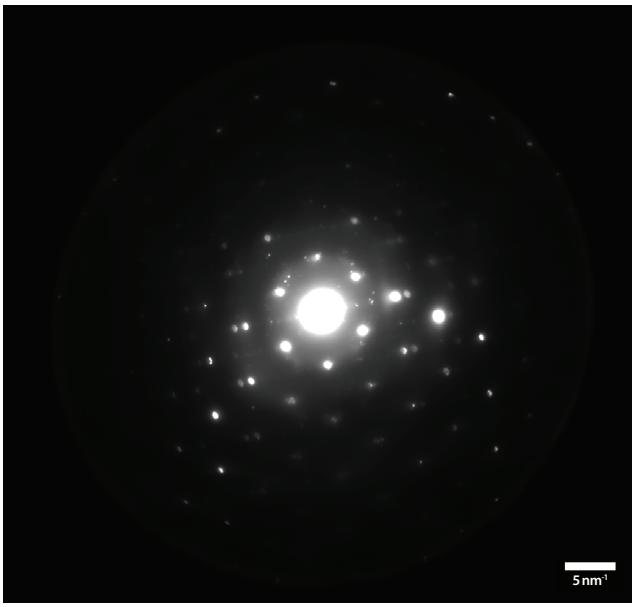
Sample courtesy of Ing. Marta Férová, Ph.D., Faculty of Science University of Ostrava



SEM: Al-Cu-Li-Mg Alloy with Precipitates

Electrolytic polishing

Point of interest: aerospace industry alloy

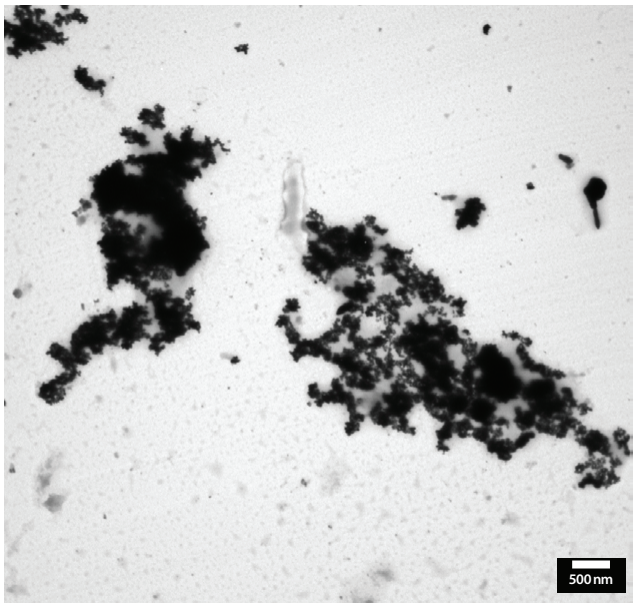


ED: Al-Cu-Li-Mg Alloy with Precipitates

Electrolytic polishing

Point of interest: aerospace industry alloy

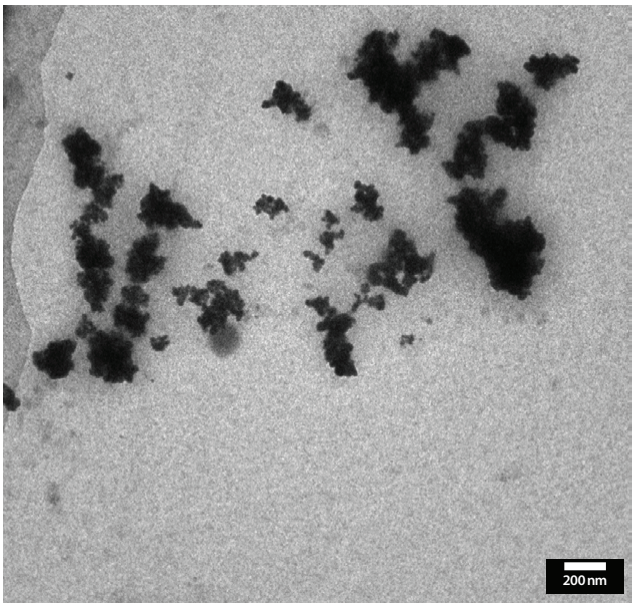
Sample courtesy of Ing. Michal Jambor, Ph.D., IPM CAS, v.v.i.



TEM: Ag NPs in Sugar Pearls

Particles on carbon film

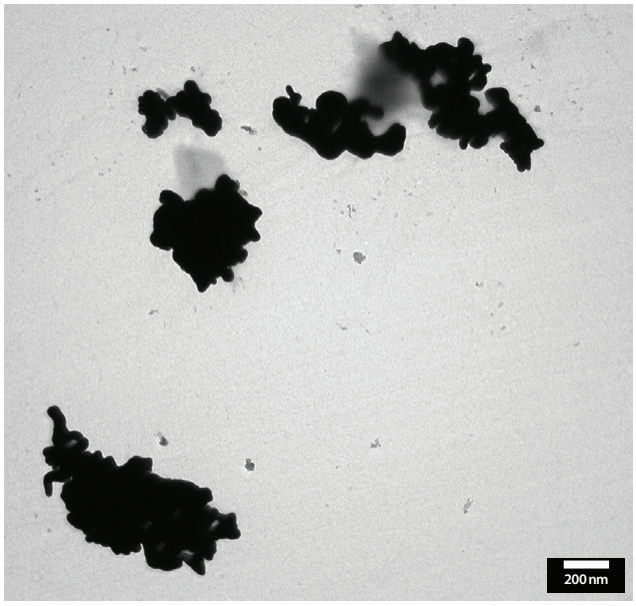
Point of interest: food diagnostics



TEM: Ag NPs in Sugar Pearls

Particles on carbon film

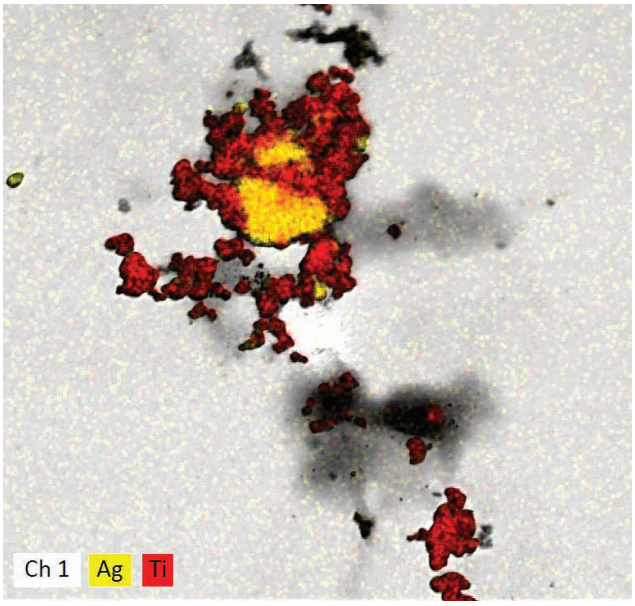
Point of interest: food diagnostics



TEM: Ag NPs in Sugar Pearls

Particles on carbon film

Point of interest: food diagnostics

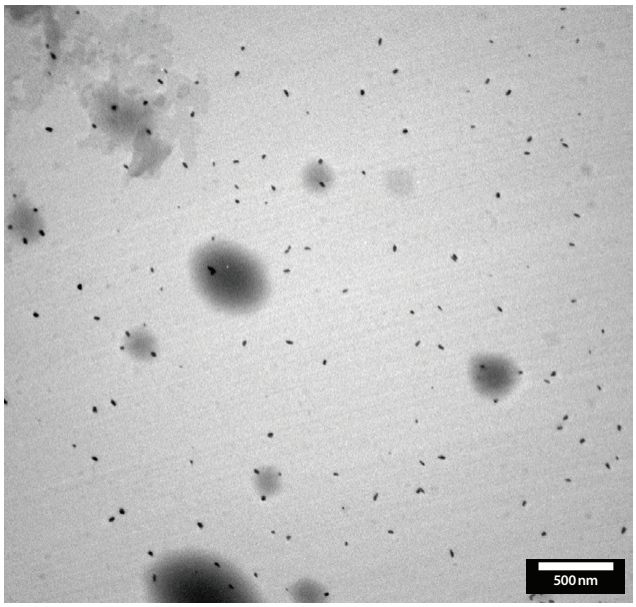


EDS: Ag NPs in Sugar Pearls

Particles on carbon film

Point of interest: food diagnostics

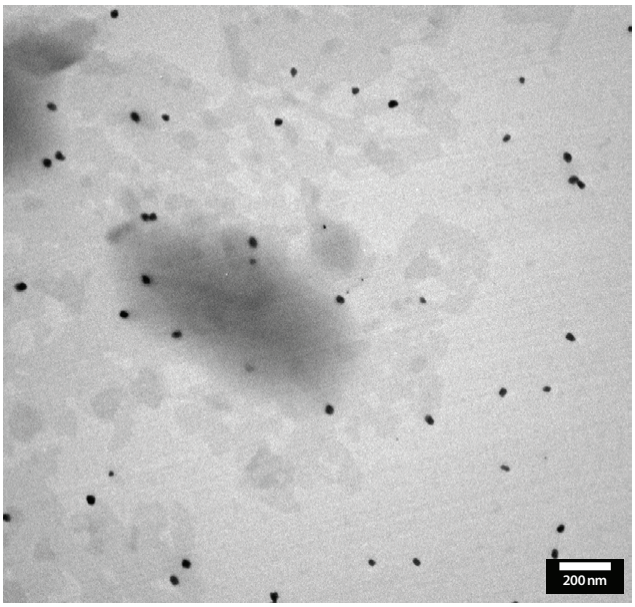
Sample courtesy of Ing. Luca Bertolla, Ph.D., Institute of Physics of Materials (IPM)



TEM: Ti NPs in Light Silver Powder

Particles on carbon film

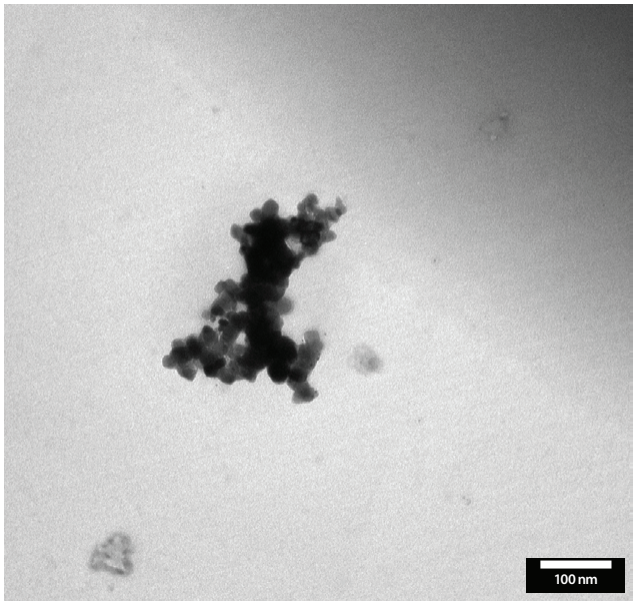
Point of interest: food diagnostics



TEM: Ti NPs in Light Silver Powder

Particles on carbon film

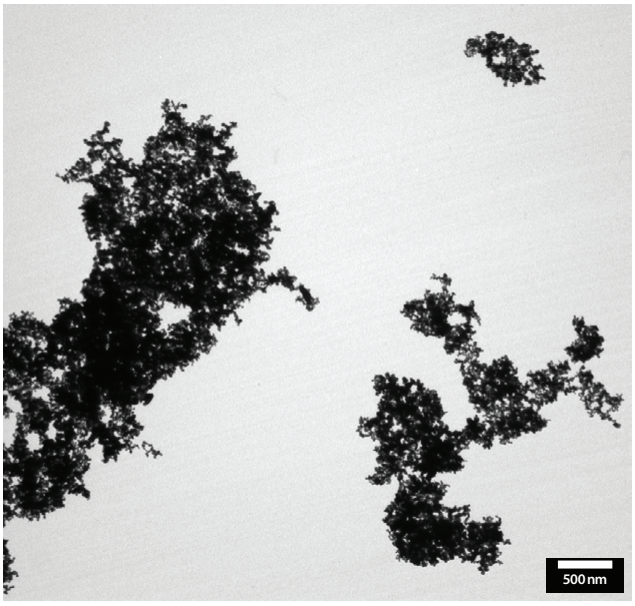
Point of interest: food diagnostics



TEM: Ti NPs in Light Silver Powder

Particles on carbon film

Point of interest: food diagnostics

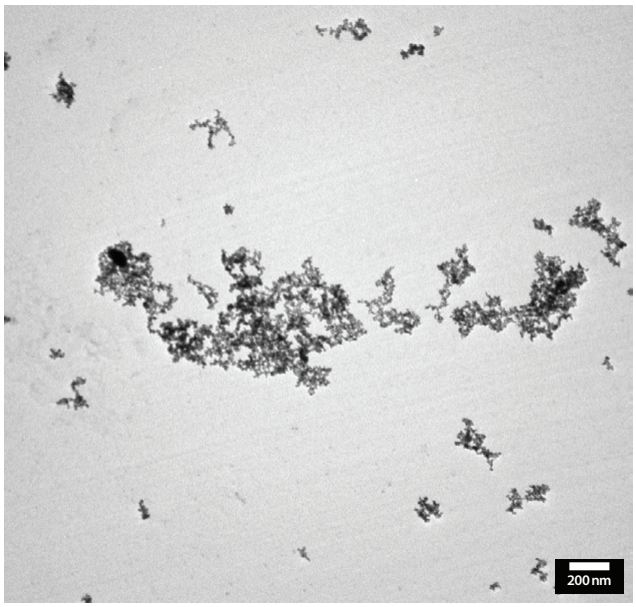


TEM: Ti NPs in Light Silver Powder

Particles on carbon film

Added 0.75 wt% of Ti NPs to light silver powder

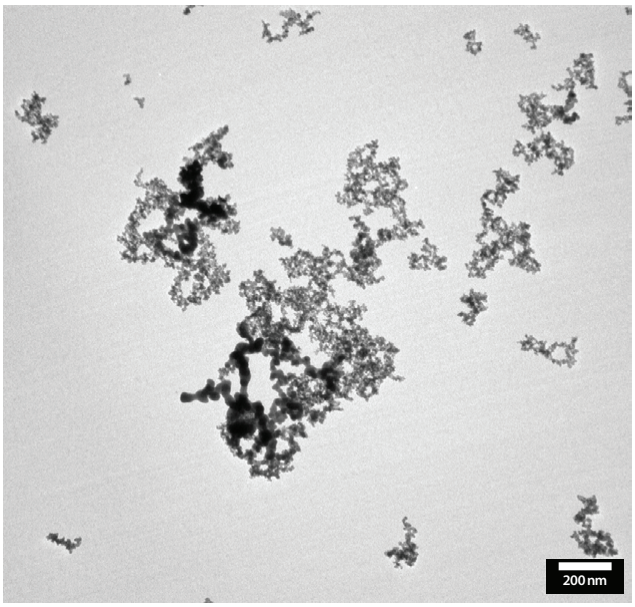
Point of interest: food diagnostics



TEM: Calcium Carbonate NPs

Particles on carbon film

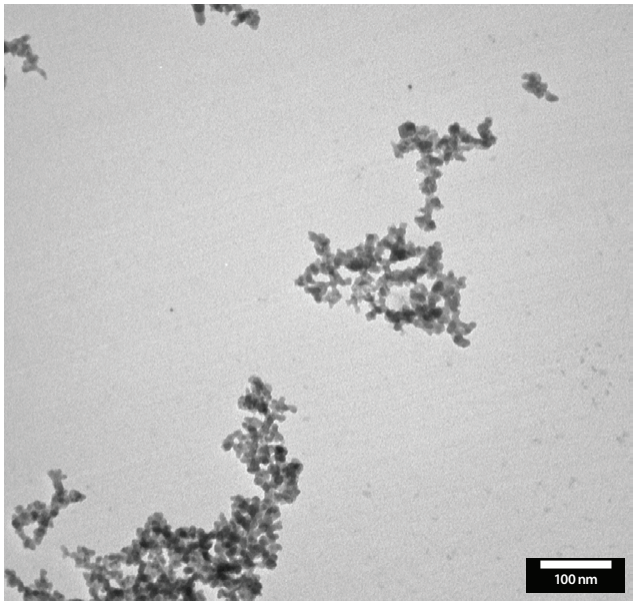
White Concentrated Food Coloring Paste,
food diagnostics, Calcium Carbonate $CaCO_3$ E170



TEM: Calcium Carbonate NPs

Particles on carbon film

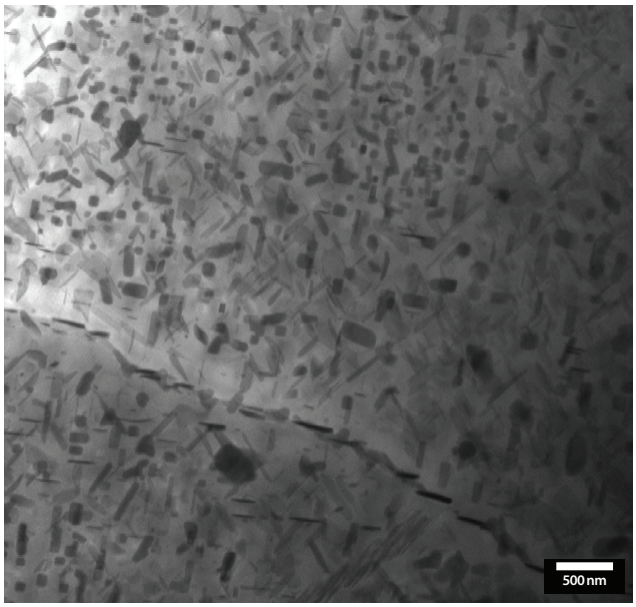
White Concentrated Food Coloring Paste,
food diagnostics, Calcium Carbonate $CaCO_3$ E170



TEM: Calcium Carbonate NPs

Particles on carbon film

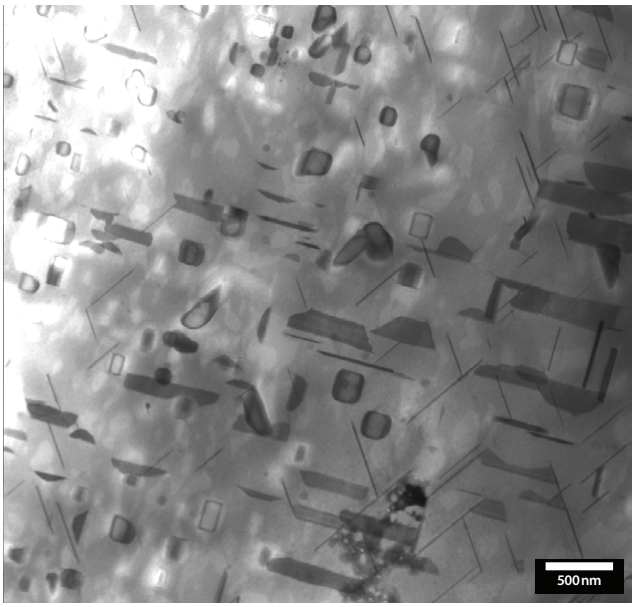
White Concentrated Food Coloring Paste,
food diagnostics, Calcium Carbonate $CaCO_3$ E170



STEM 15 kV: Al-Cu-Li-Mg Alloy with Precipitates

Electrolytic polishing

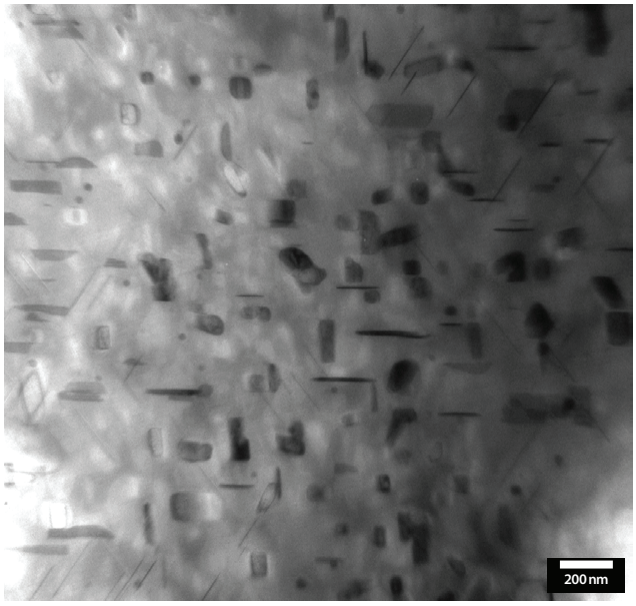
Point of interest: aerospace industry alloy



STEM 10 kV: Al-Cu-Li-Mg Alloy with Precipitates

Electrolytic polishing

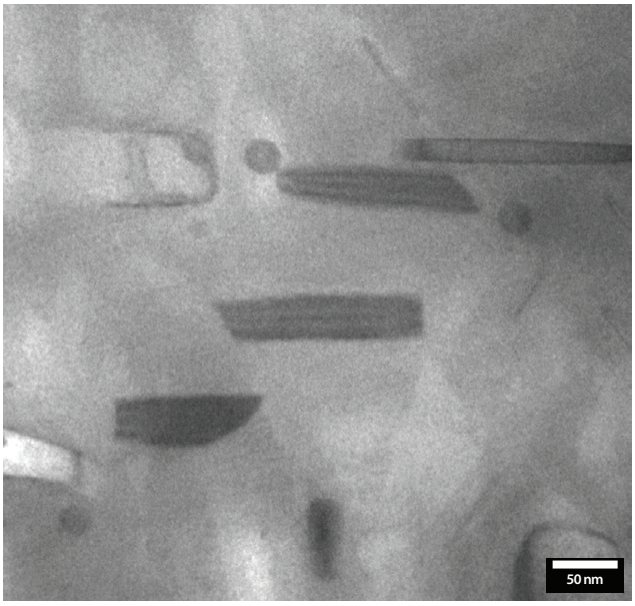
Point of interest: aerospace industry alloy



TEM: Al-Cu-Li-Mg Alloy with Precipitates

Electrolytic polishing

Point of interest: aerospace industry alloy

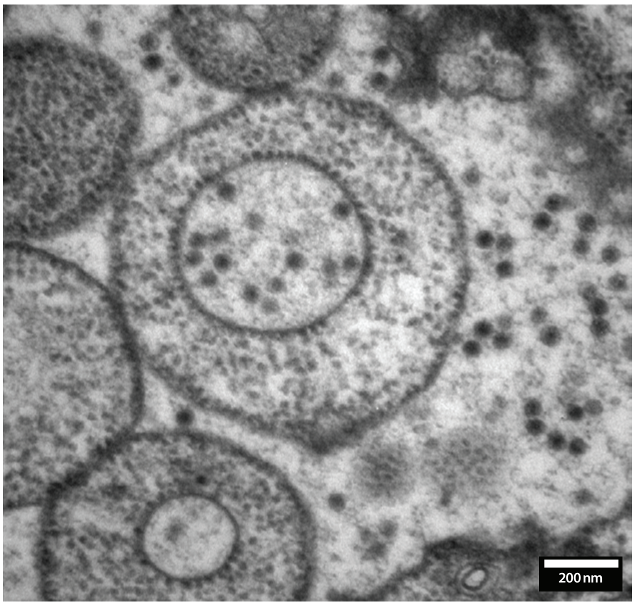


TEM: Al-Cu-Li-Mg Alloy with Precipitates

Electrolytic polishing

Point of interest: aerospace industry alloy

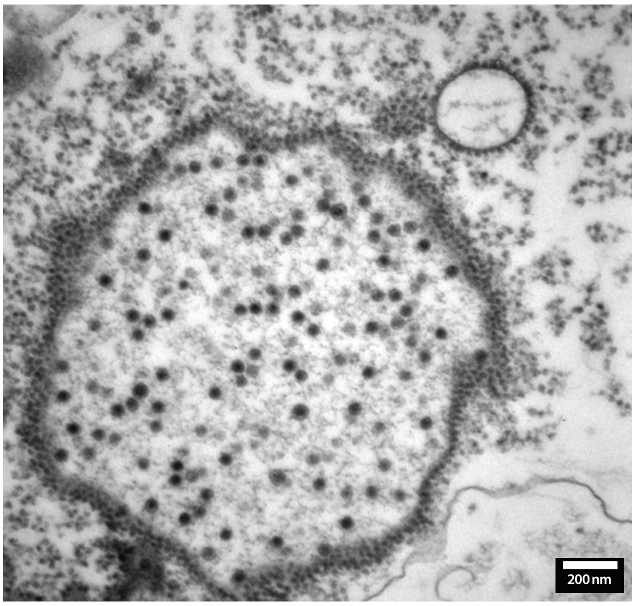
Sample courtesy of Ing. Michal Jambor, Ph.D., IPM CAS, v.v.i.



TEM: Portugal Mosquito Flavivirus Marim

Stained section

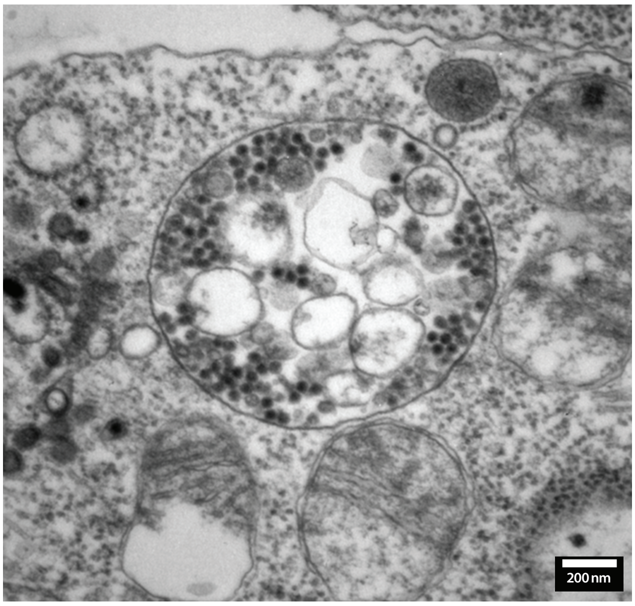
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), poststained (UA-LC), carbon reinforced



TEM: Portugal Mosquito Flavivirus Marim

Stained section

Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), poststained (UA-LC), carbon reinforced



TEM: Portugal Mosquito Flavivirus Marim

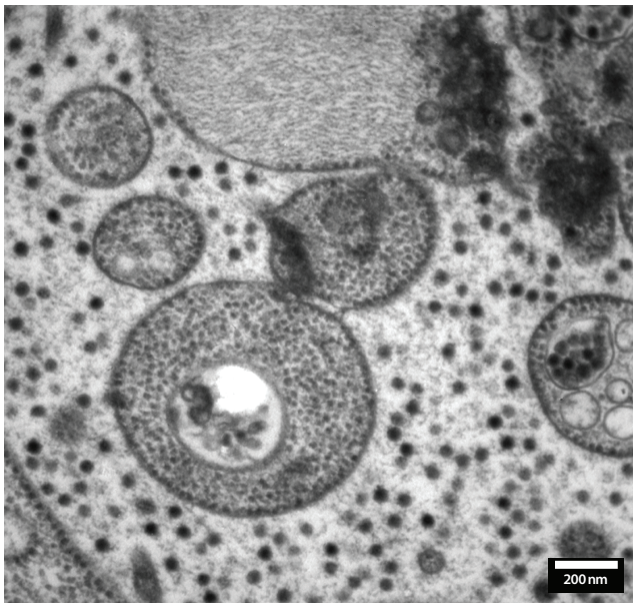
Stained section

Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), poststained (UA-LC), carbon reinforced

TEM: Portugal Mosquito Flavivirus Marim

Stained section

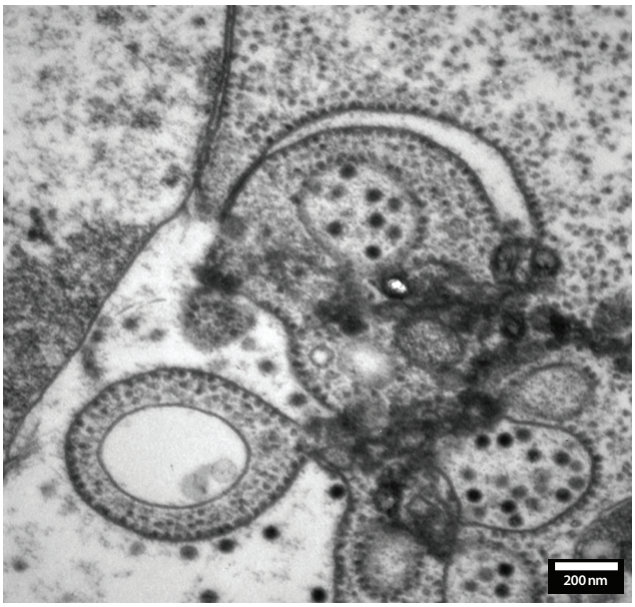
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Portugal Mosquito Flavivirus Marim

Stained section

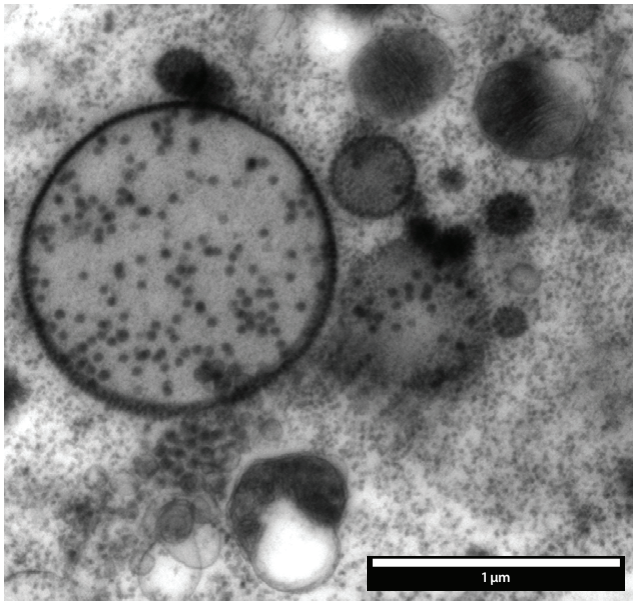
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Portugal Mosquito Flavivirus Marim

Stained section

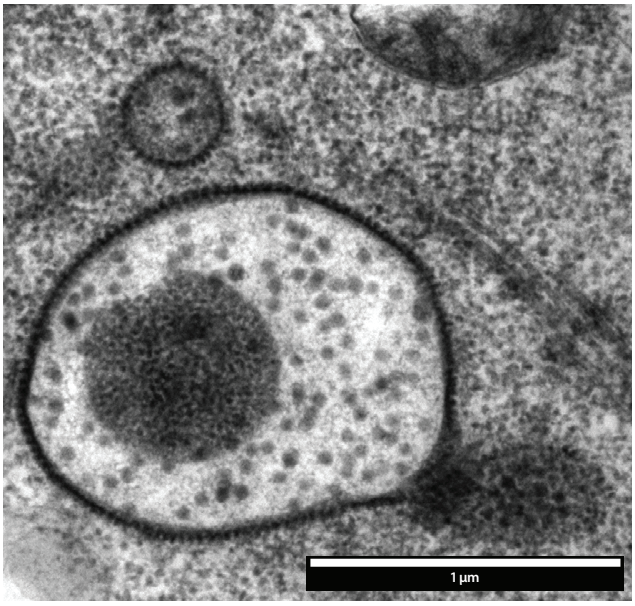
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



STEM 10 kV: Portugal Mosquito Flavivirus Marim

Stained section

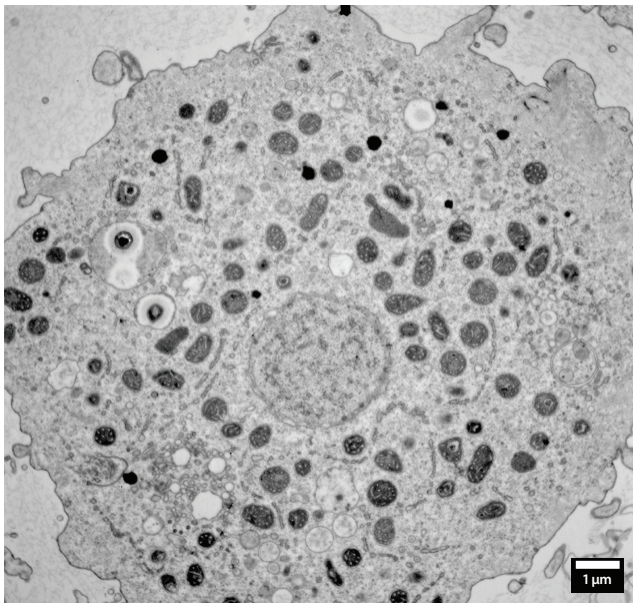
Epon embedded, 200 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



STEM 10 kV: Portugal Mosquito Flavivirus Marim

Stained section

Epon embedded, 200 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

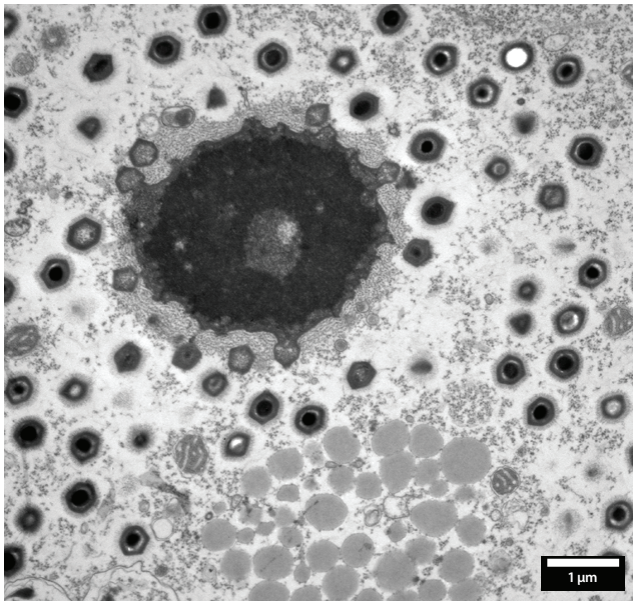
Stained section

Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), poststained (UA-LC), carbon reinforced

TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

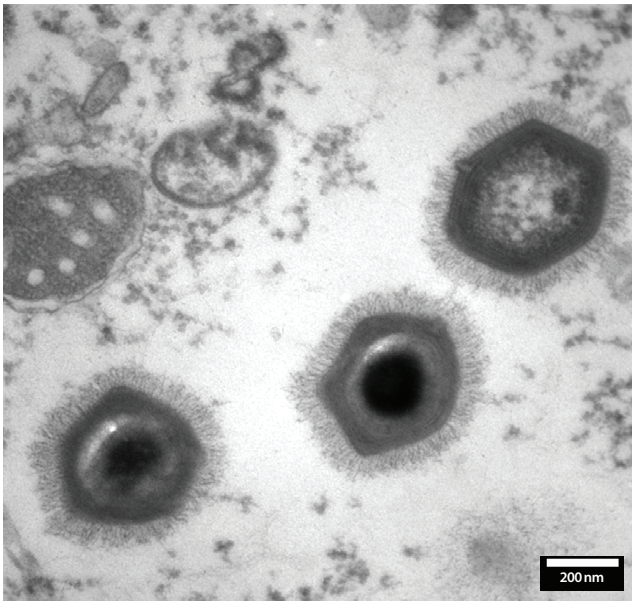
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), poststained (UA-LC), carbon reinforced



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

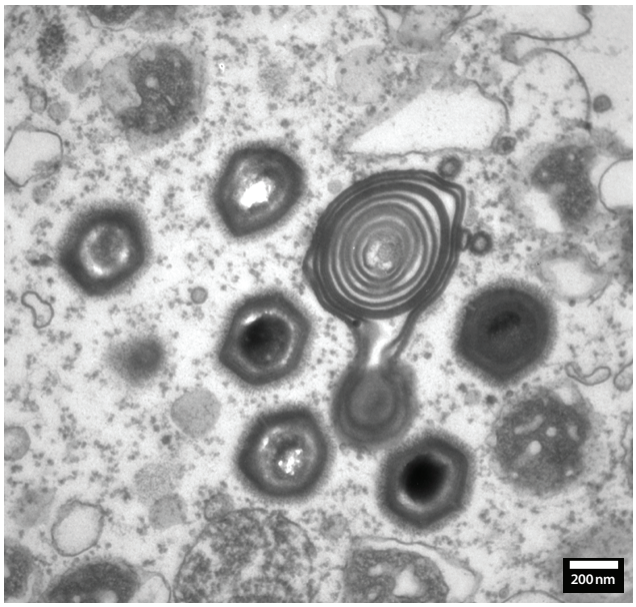
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

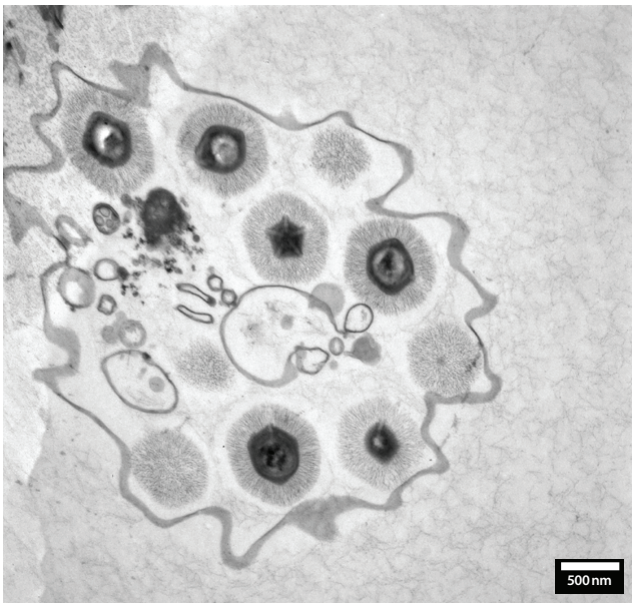
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

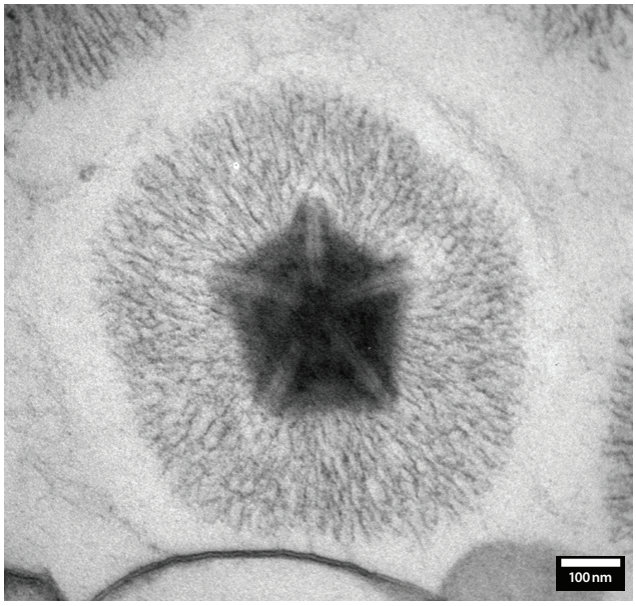
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

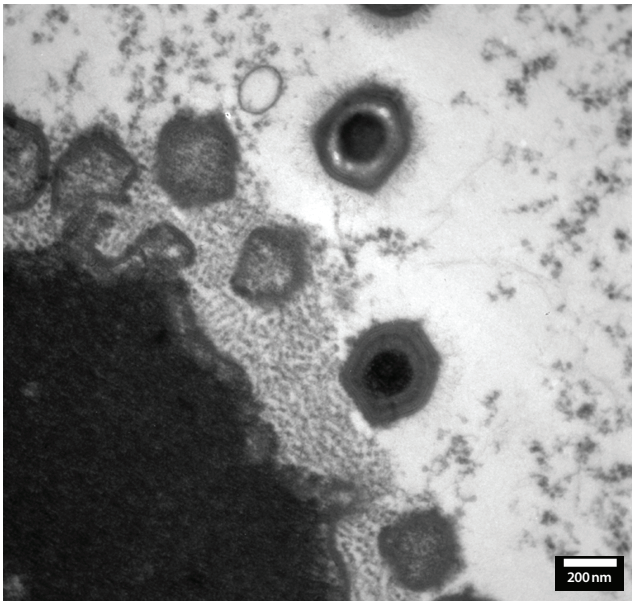
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

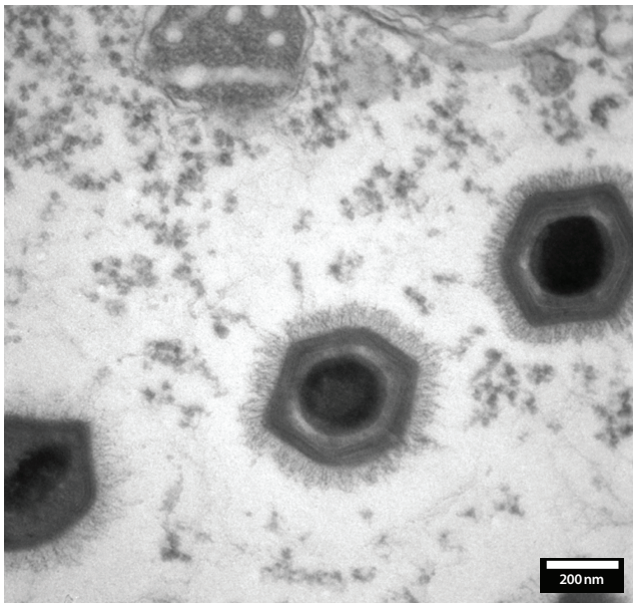
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

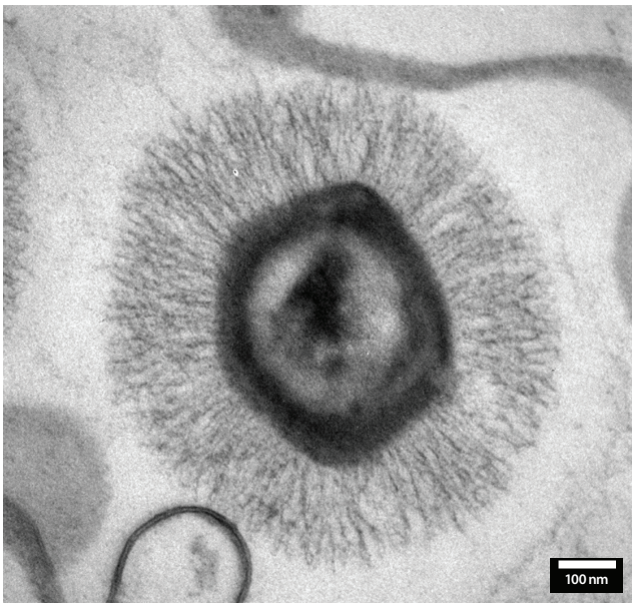
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

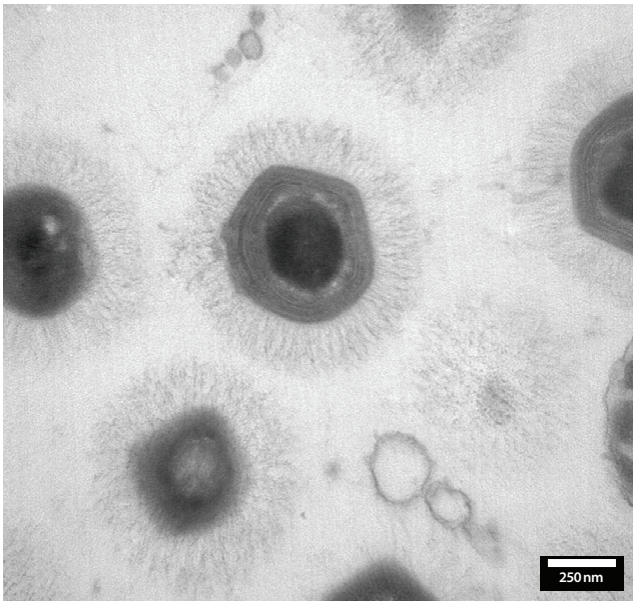
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

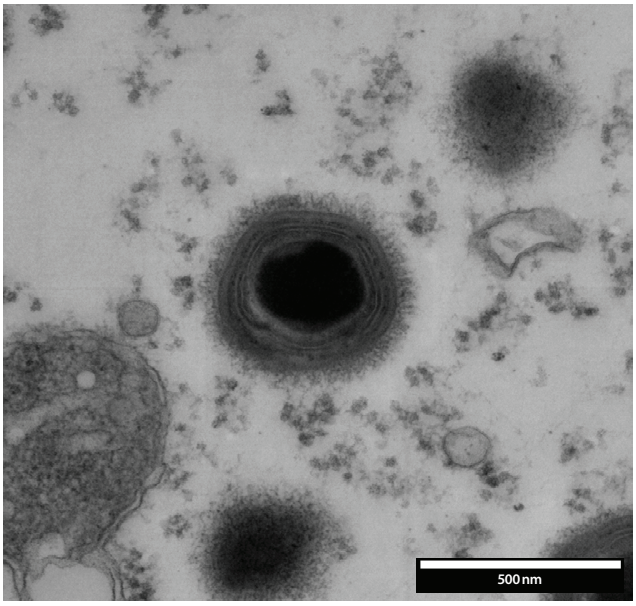
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

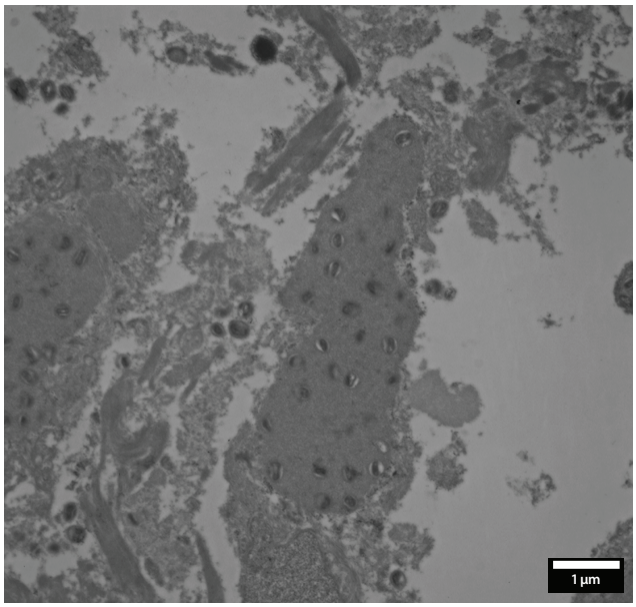
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Acanthamoeba Polyphaga Mimivirus

Stained section

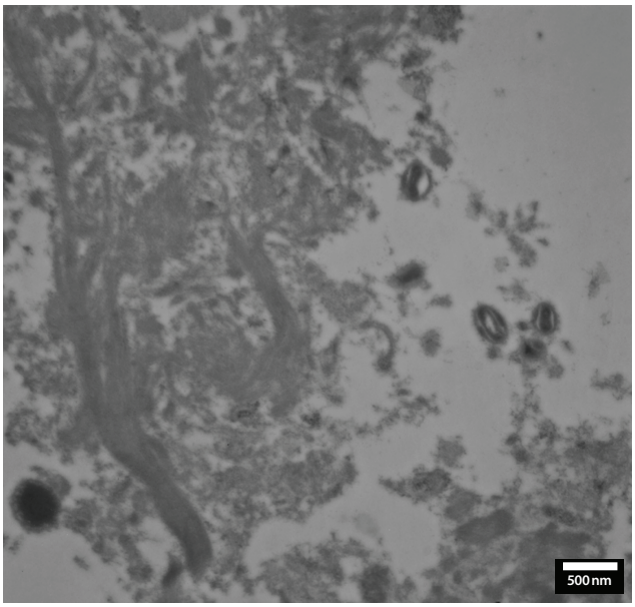
Epon embedded, 70 nm, block contrasted (1% OsO_4 + 2% UAc), without poststaining and carbon reinforcement



TEM: Cowpox Virus on an Elephant Tongue

Stained section

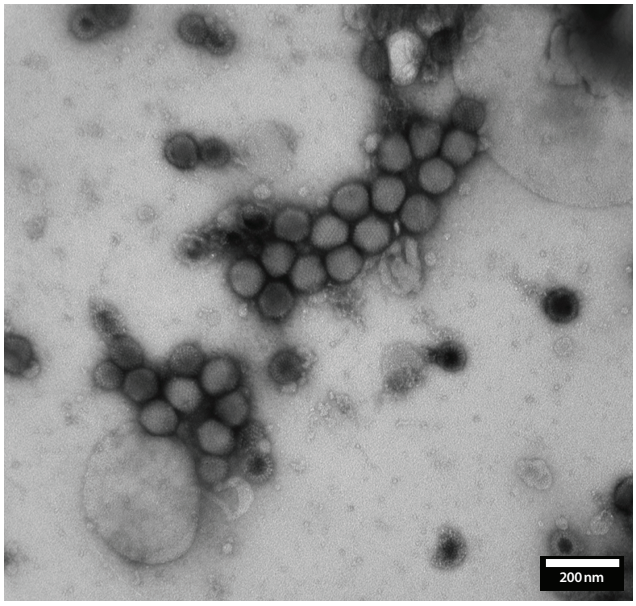
LR-White embedded, 70 nm, no block contrast, post stained with UA-LC, carbon reinforced



TEM: Cowpox Virus on an Elephant Tongue

Stained section

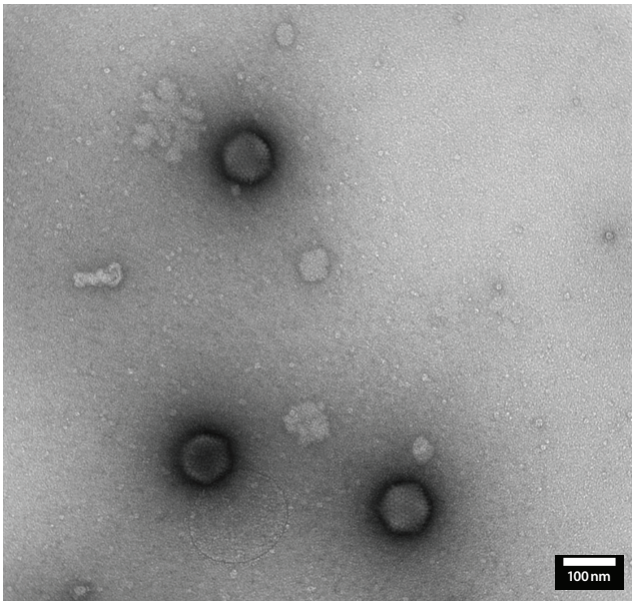
LR-White embedded, 70 nm, no block contrast, post stained with UA-LC, carbon reinforced



TEM: Adenovirus and rotavirus

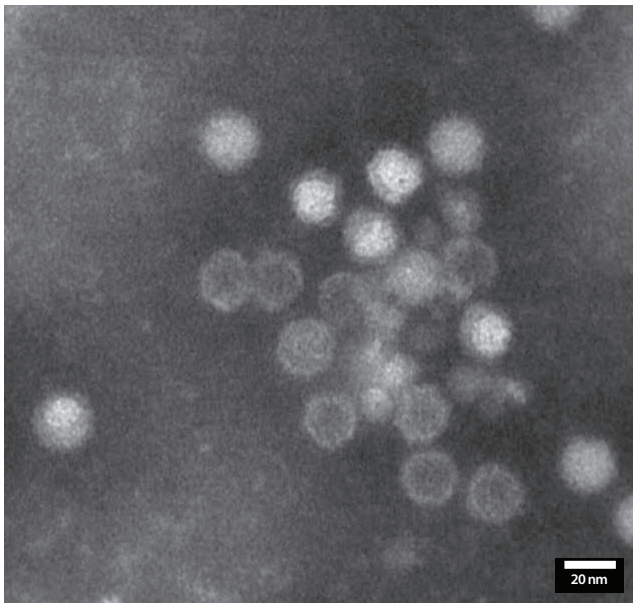
Stained particles on carbon film

Virus with UA staining



TEM: Adenovirus

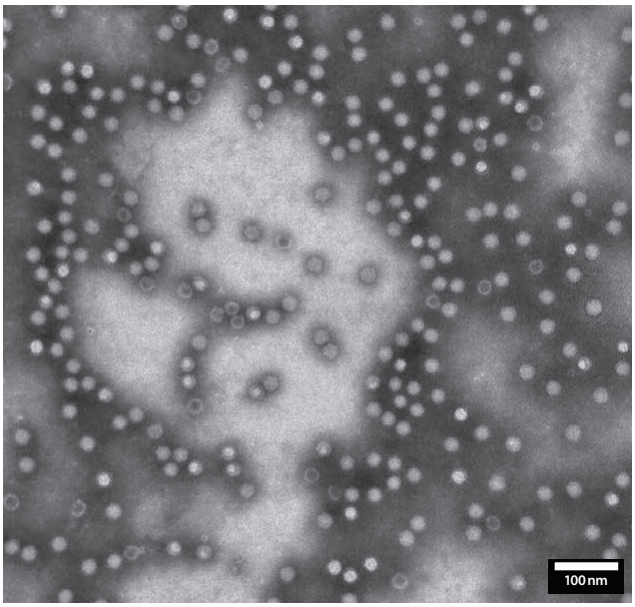
Stained particles on carbon film



TEM: Adeno-Associated Viruses

Stained particles on carbon film

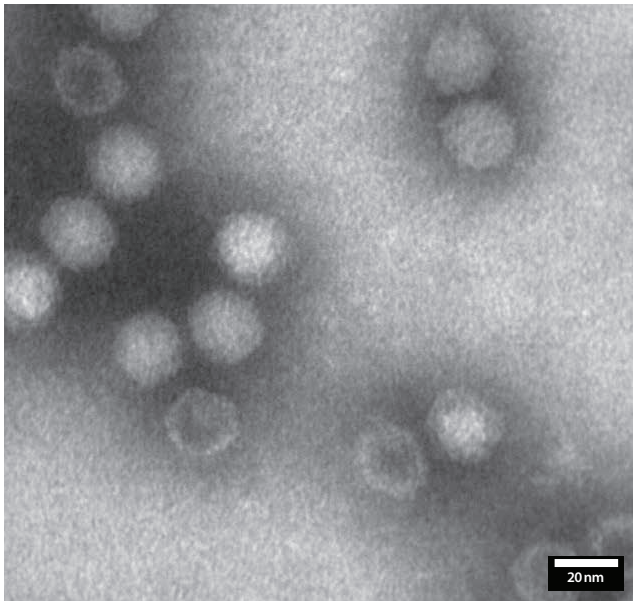
Negative stained AAV (1 minute PTA 2%), diameter of about 20 nm



TEM: Adeno-Associated Viruses

Stained particles on carbon film

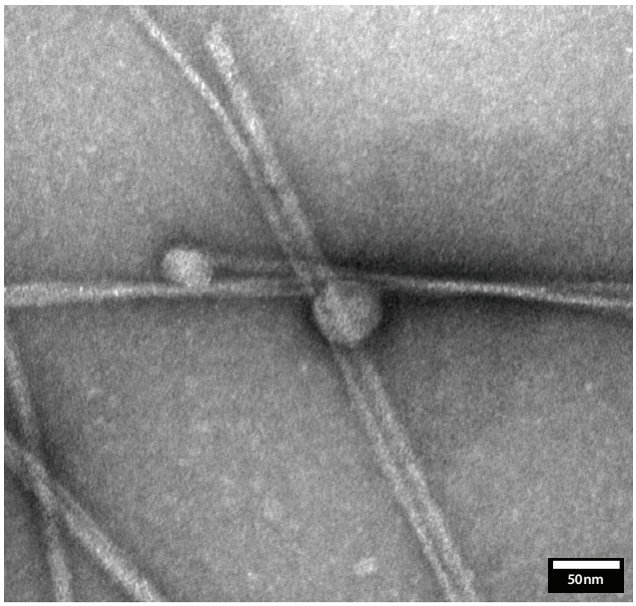
Negative stained AAV (1 minute PTA 2%), diameter of about 20 nm



TEM: Adeno-Associated Viruses

Stained particles on carbon film

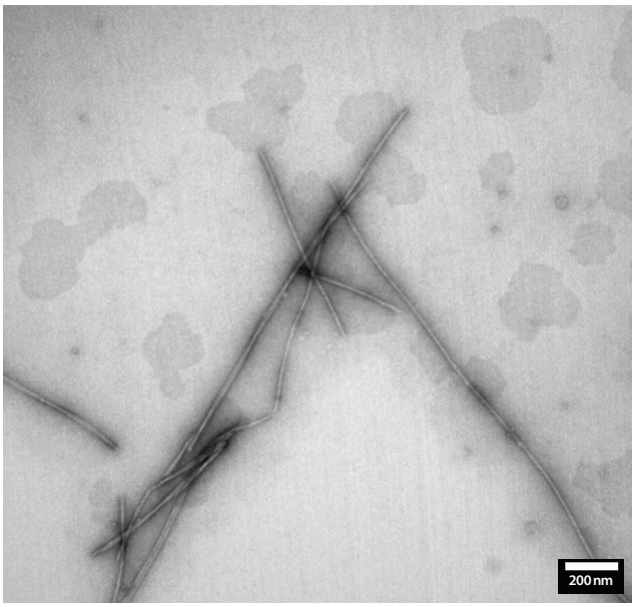
Negative stained AAV (1 minute PTA 2%), diameter of about 20 nm



TEM: Nano Filaments

Stained particles on carbon film

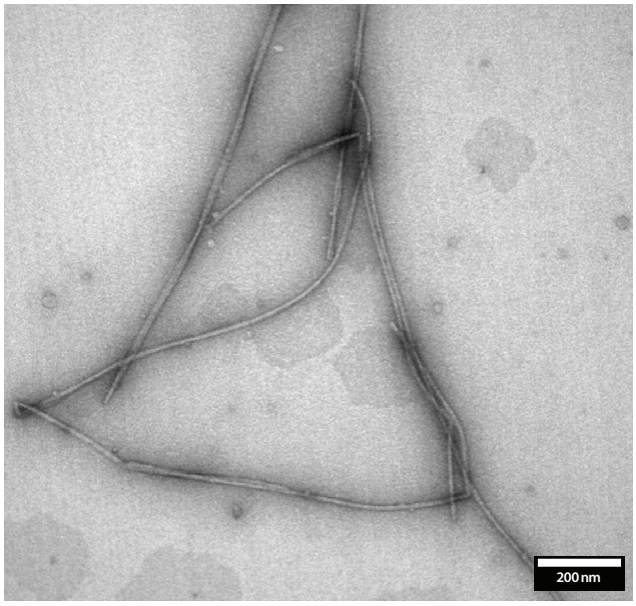
Viral nucleoprotein ring



TEM: Nano Filaments

Stained particles on carbon film

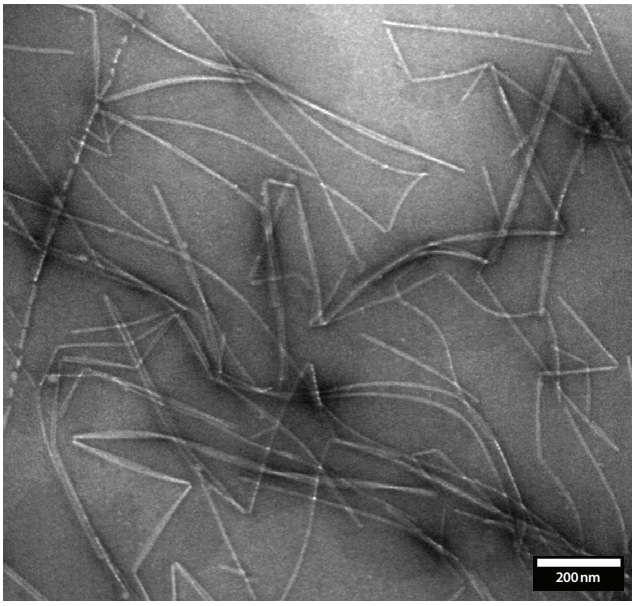
Viral nucleoprotein ring



TEM: Nano Filaments

Stained particles on carbon film

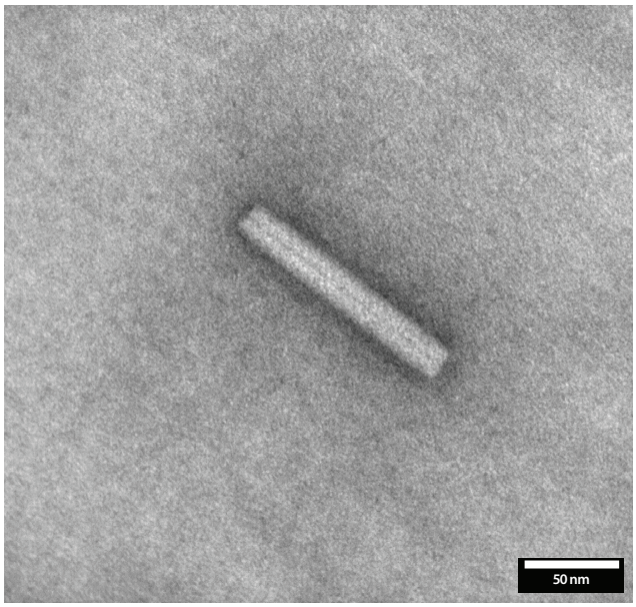
Viral nucleoprotein ring



TEM: Nano Filaments

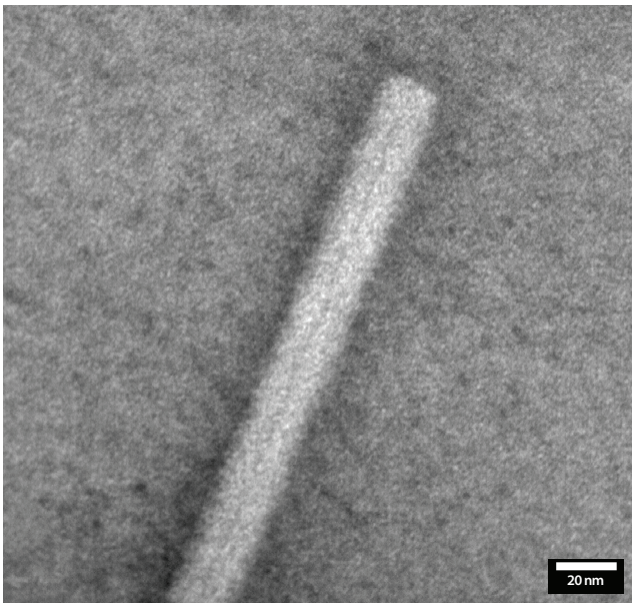
Stained particles on carbon film

Viral nucleoprotein ring



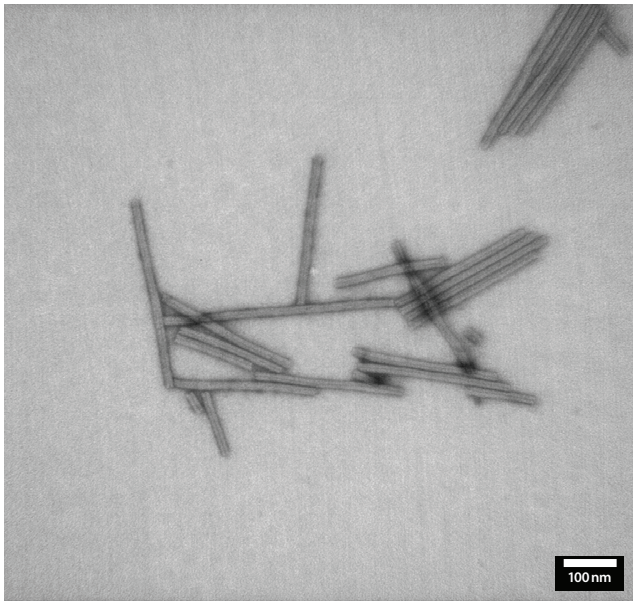
TEM: Tobacco Mosaic Virus

Stained particles on carbon film



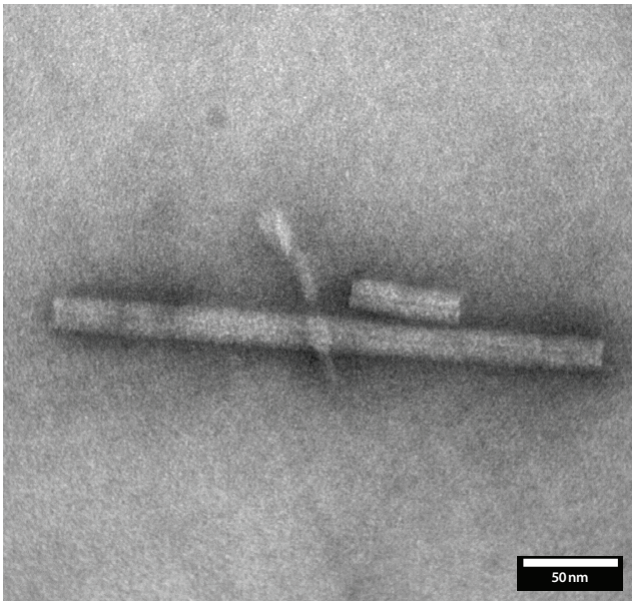
TEM: Tobacco Mosaic Virus

Stained particles on carbon film



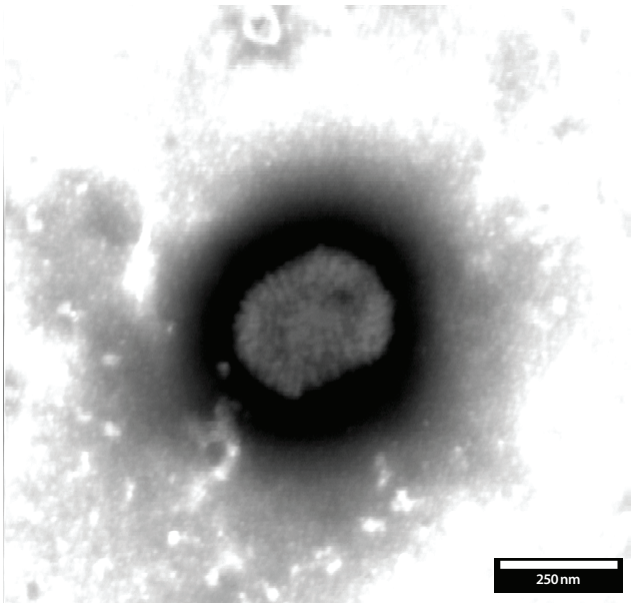
TEM: Tobacco Mosaic Virus

Stained particles on carbon film



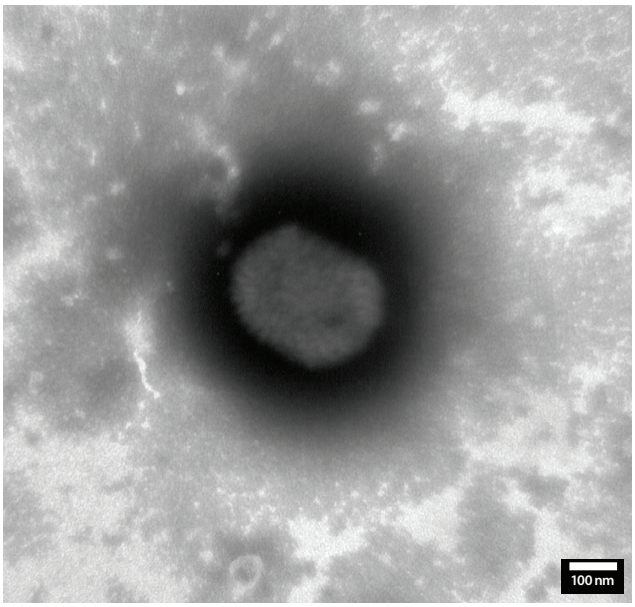
TEM: Tobacco Mosaic Virus

Stained particles on carbon film



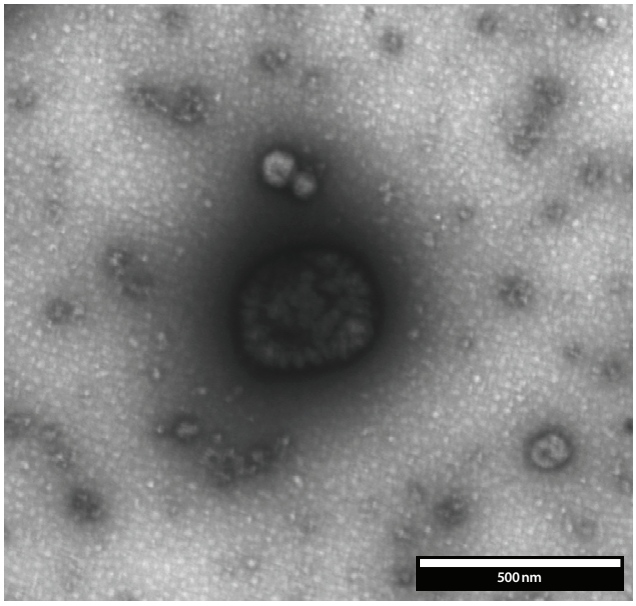
STEM 15 kV: Pox Virus

Stained particles on carbon film



STEM 15 kV: Pox Virus

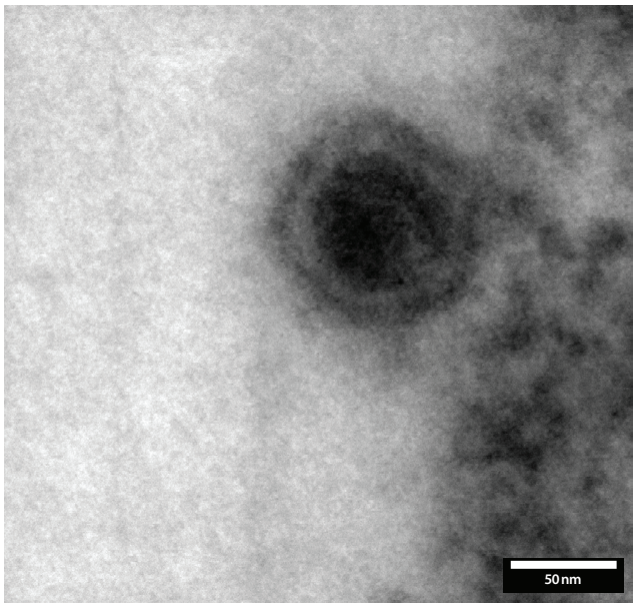
Stained particles on carbon film



STEM 15 kV: Vaccinia Virus VR-1536

Stained particles on carbon film

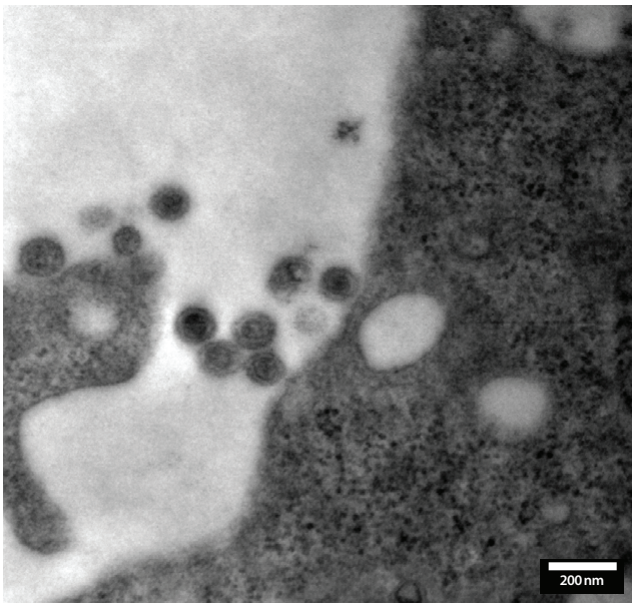
Carbon reinforced pioloform coated grid, 70nm, pretreated (alcian blue), washed 3×, neg. stained (1% UAc)



STEM 15 kV: Coronavirus

Stained section

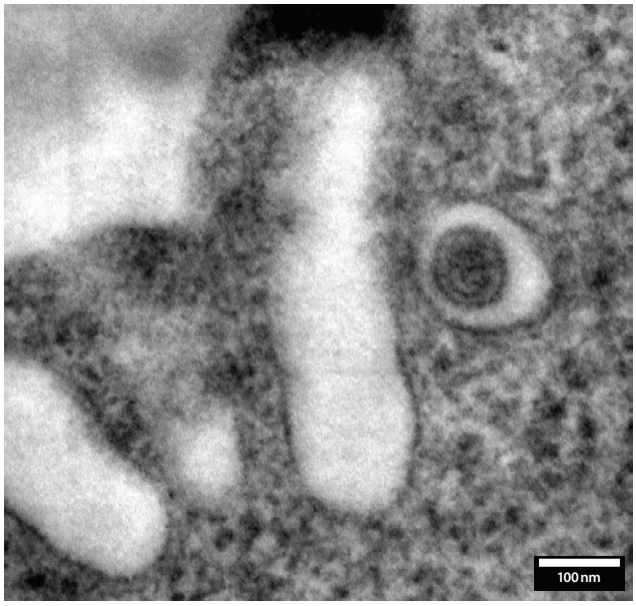
Ducurpan embedded, 80 nm, block contrasted.
Point of Interest: SARS-CoV-2 interaction with the cells.



STEM 15 kV: Coronavirus

Stained section

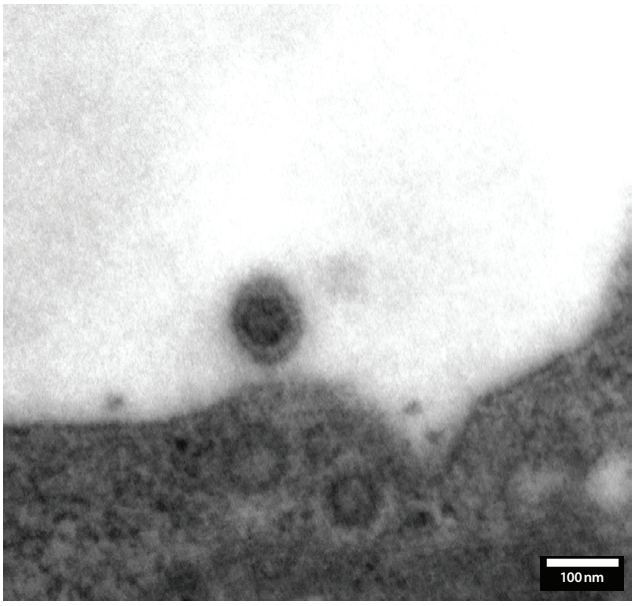
Ducurpan embedded, 80 nm, block contrasted.
Point of Interest: SARS-CoV-2 interaction with the cells.



STEM 15 kV: Coronavirus

Stained section

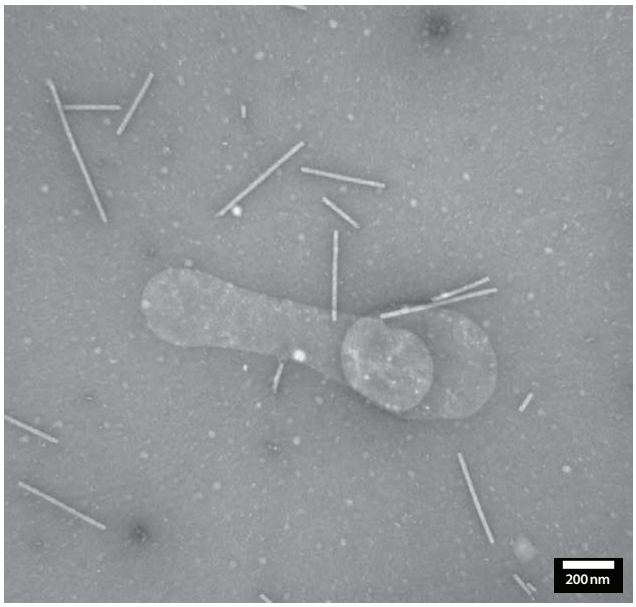
Ducurpan embedded, 80 nm, block contrasted.
Point of Interest: SARS-CoV-2 interaction with the cells.



STEM 15 kV: Coronavirus

Stained section

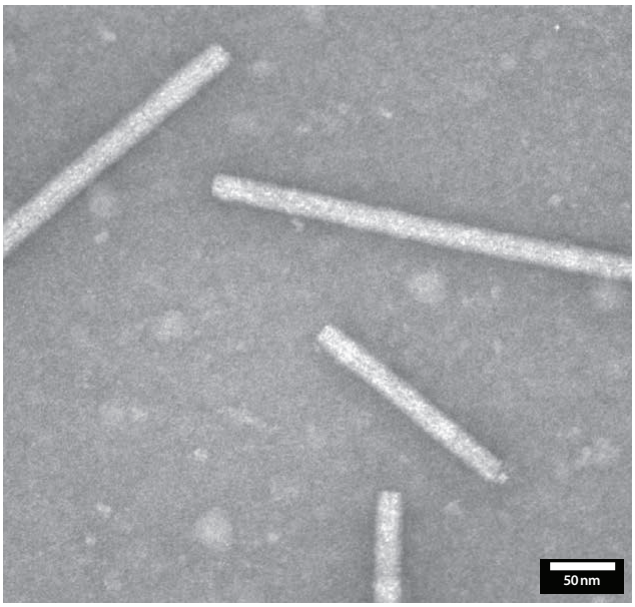
Ducurpan embedded, 80 nm, block contrasted.
Point of Interest: SARS-CoV-2 interaction with the cells.



TEM: Tobacco Mosaic Virus

Particles on formvar

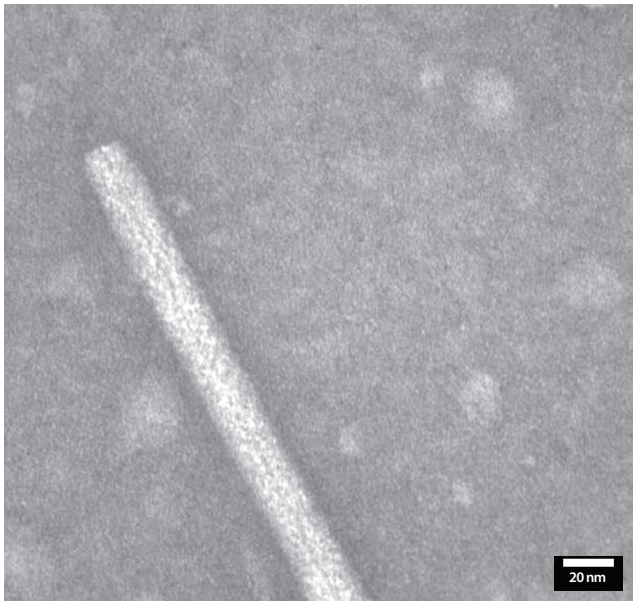
Negative staining



TEM: Tobacco Mosaic Virus

Particles on formvar

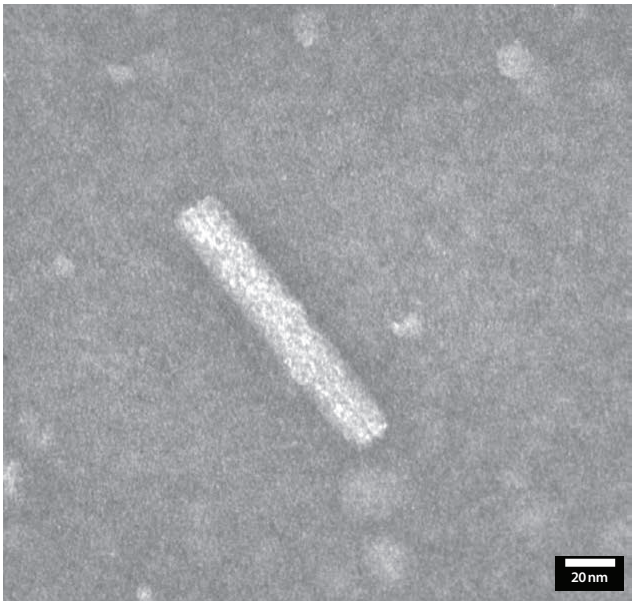
Negative staining



TEM: Tobacco Mosaic Virus

Particles on formvar

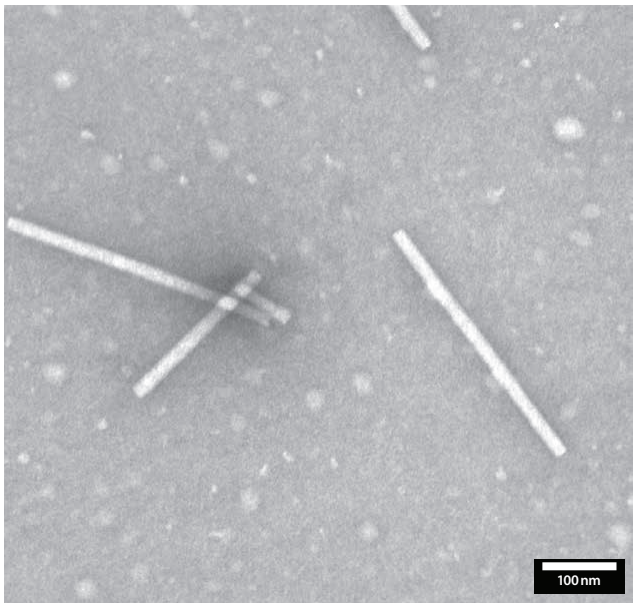
Negative staining



TEM: Tobacco Mosaic Virus

Particles on formvar

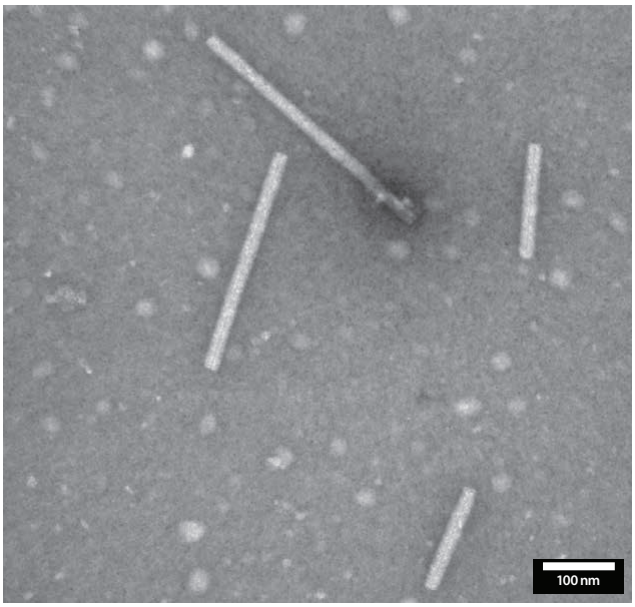
Negative staining



TEM: Tobacco Mosaic Virus

Particles on formvar

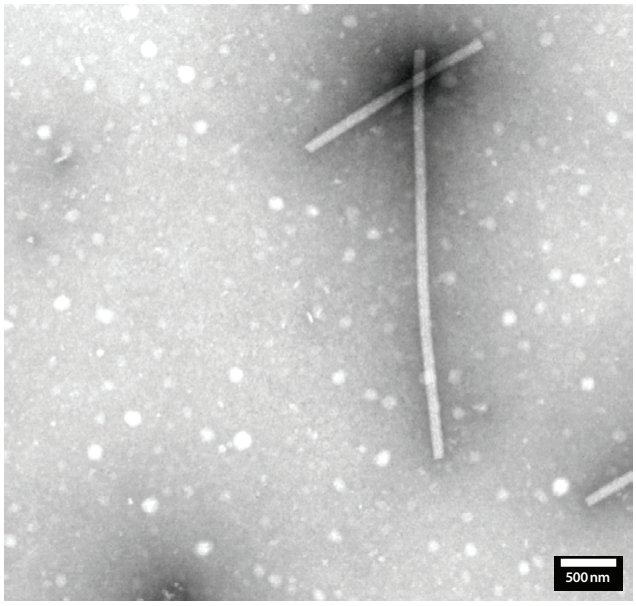
Negative staining



TEM: Tobacco Mosaic Virus

Particles on formvar

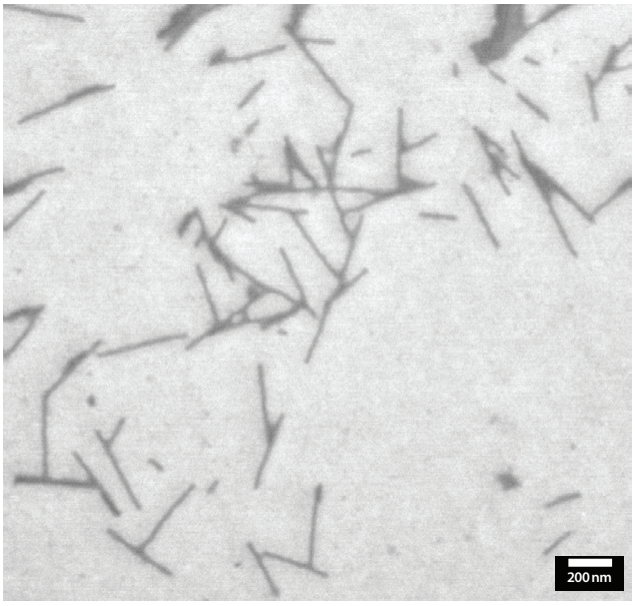
Negative staining



STEM 15 kV: Tobacco Mosaic Virus

Particles on formvar

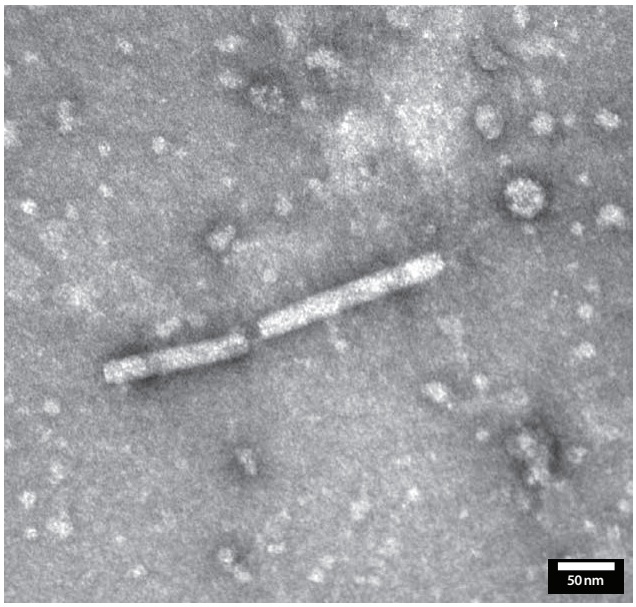
Without staining



STEM 15 kV: Tobacco Mosaic Virus

Particles on formvar

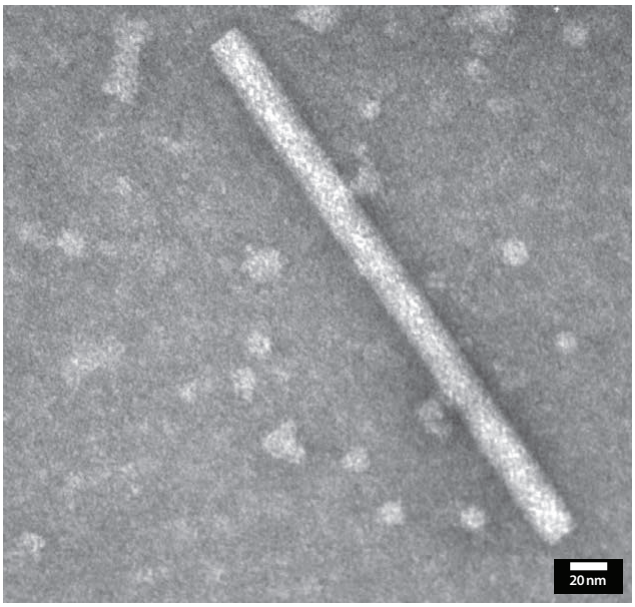
Without staining



TEM: Tobacco Mosaic Virus

Particles on formvar

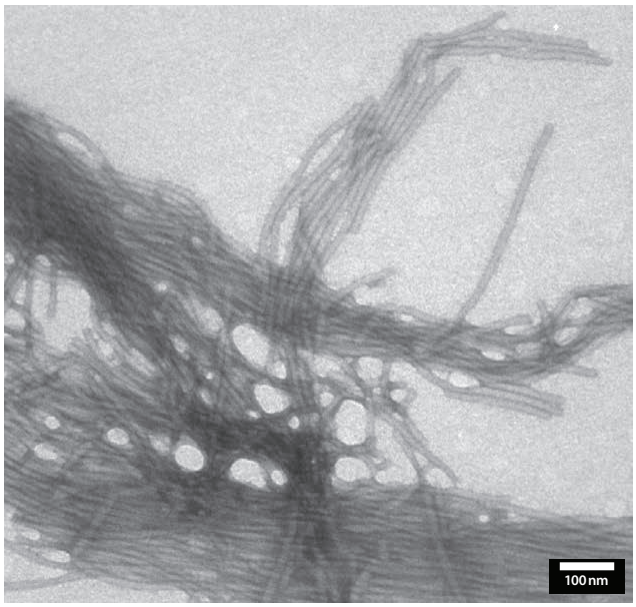
Raw extract from infected leaves, negatively stained with 0.5% UAc in water



TEM: Tobacco Mosaic Virus

Particles on formvar

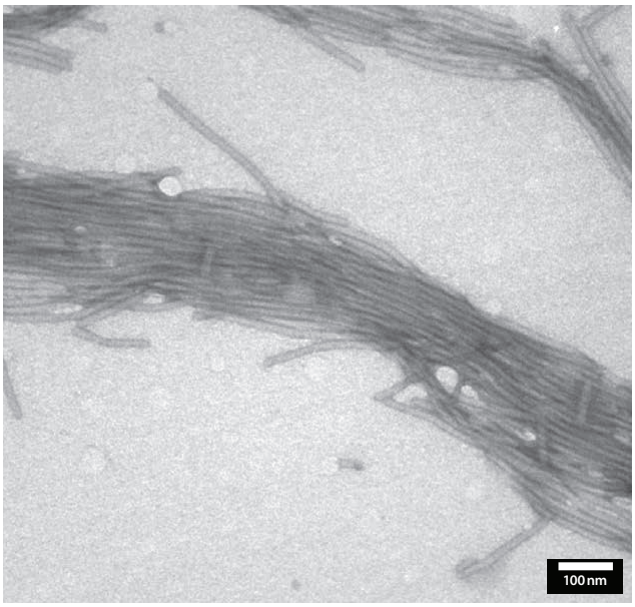
Raw extract from infected leaves, negatively stained with 0.5% UAc in water



TEM: Pepino Mosaic Virus

Particles on formvar

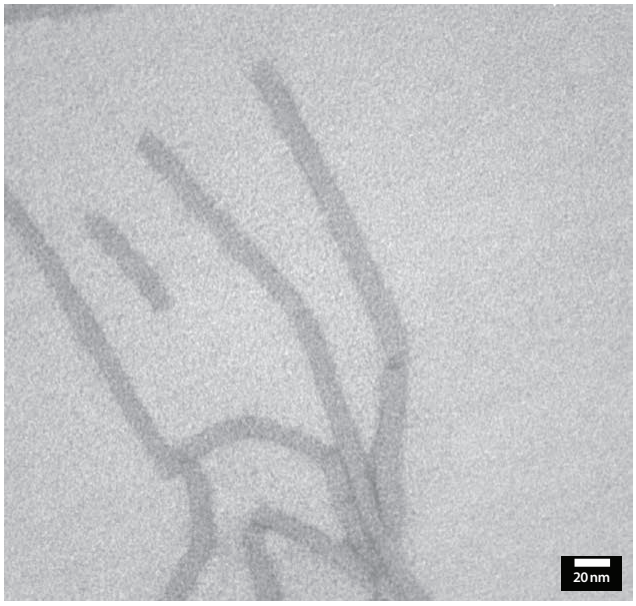
Negatively stained with 0.5% uranyl acetate



TEM: Pepino Mosaic Virus

Particles on formvar

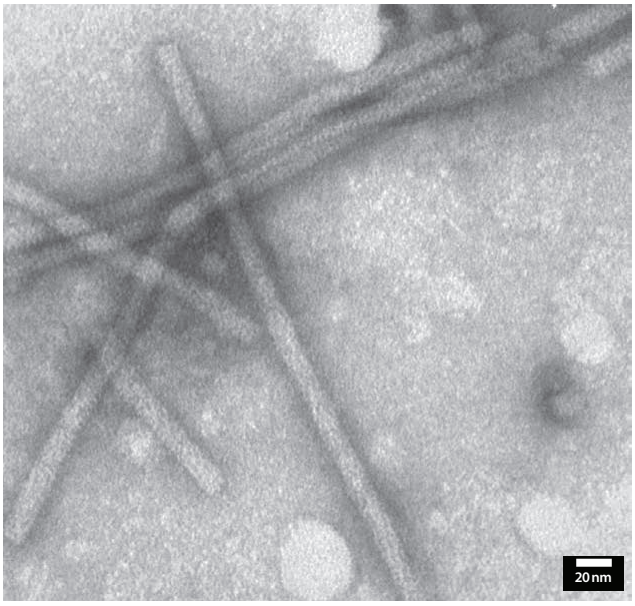
Negatively stained with 0.5% uranyl acetate



TEM: Pepino Mosaic Virus

Particles on formvar

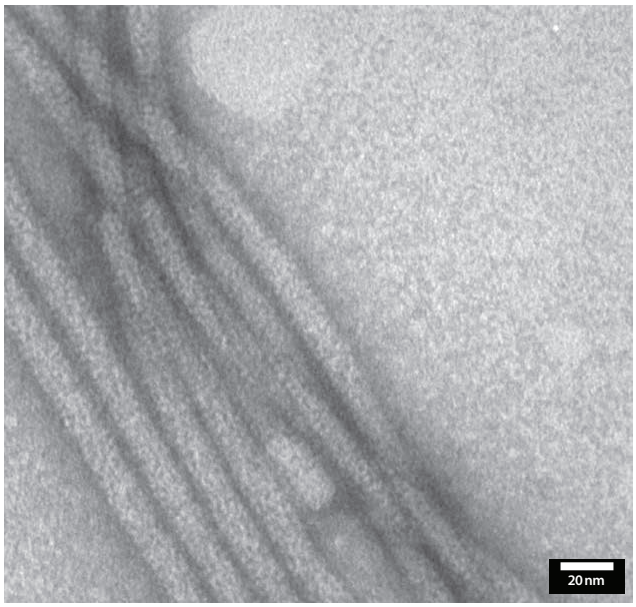
Negatively stained with 0.5% uranyl acetate



TEM: Pepino Mosaic Virus

Particles on formvar

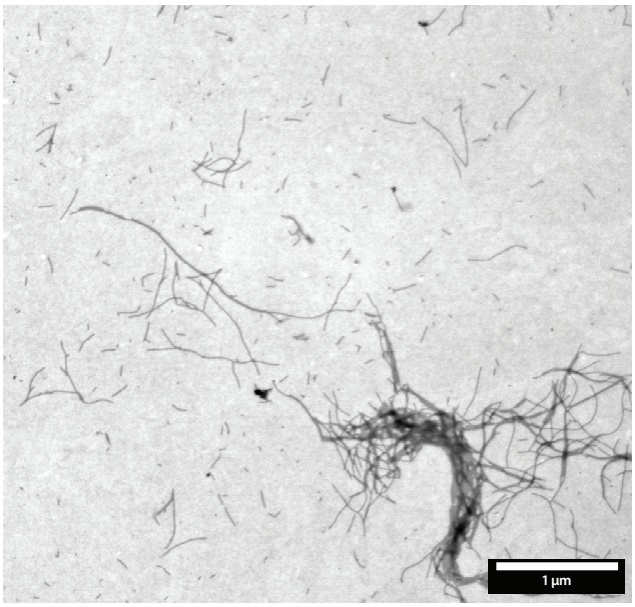
Negatively stained with 0.5% uranyl acetate



TEM: Pepino Mosaic Virus

Particles on formvar

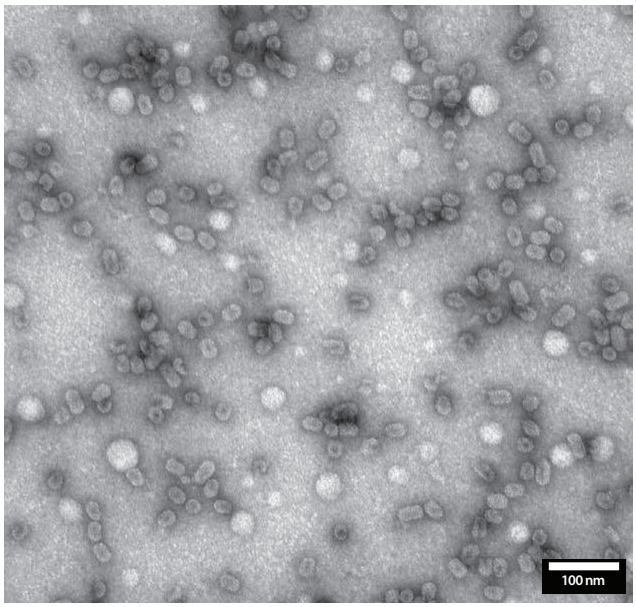
Negatively stained with 0.5% uranyl acetate



TEM: Pepino Mosaic Virus

Particles on formvar

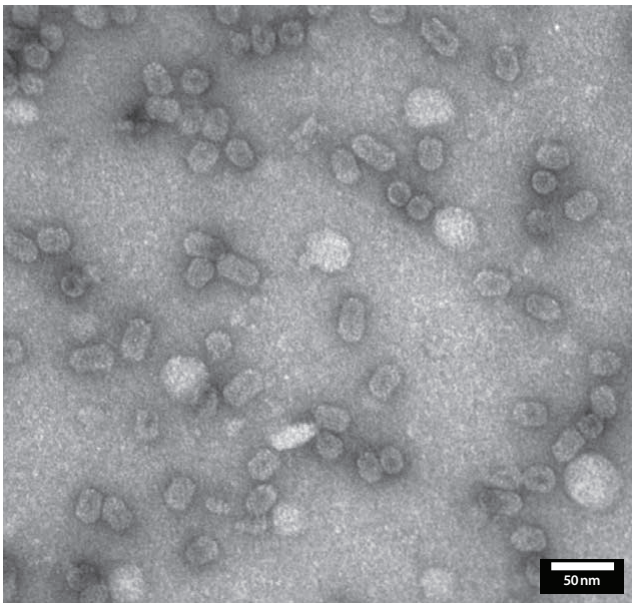
Without staining



TEM: Ourmia Melon Virus

Particles on formvar

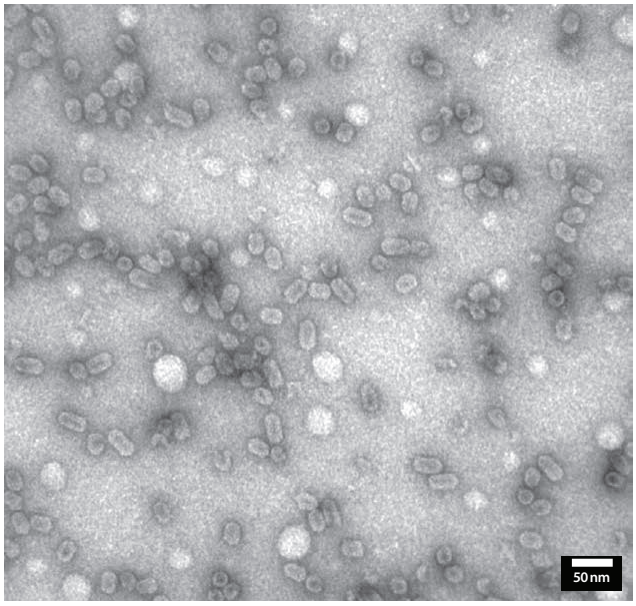
Negatively stained with 0.5% UAc in water



TEM: Ourmia Melon Virus

Particles on formvar

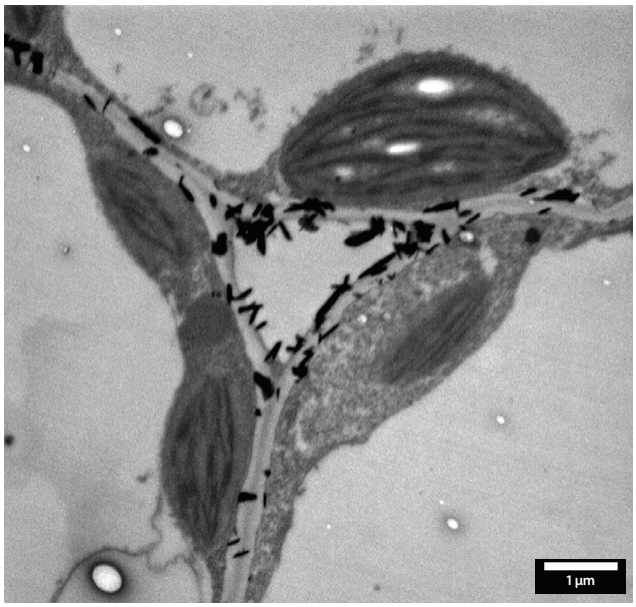
Negatively stained with 0.5% UAc in water



TEM: Ourmia Melon Virus

Particles on formvar

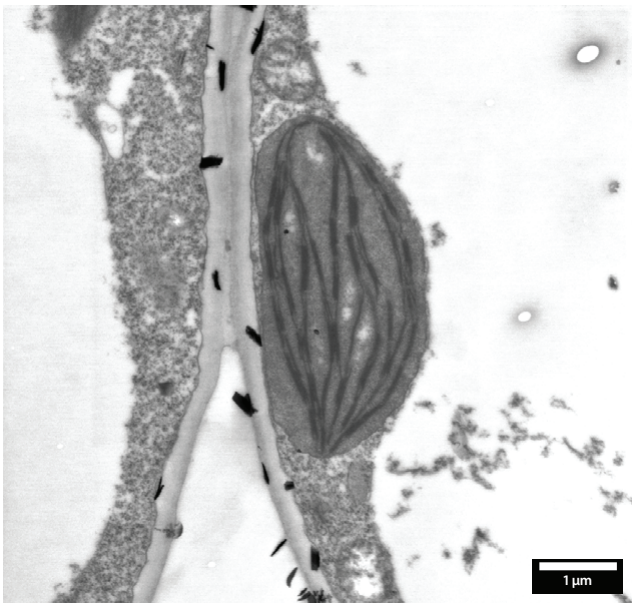
Negatively stained with 0.5% UAc in water



TEM: Central Leaf Vein

Section on formvar

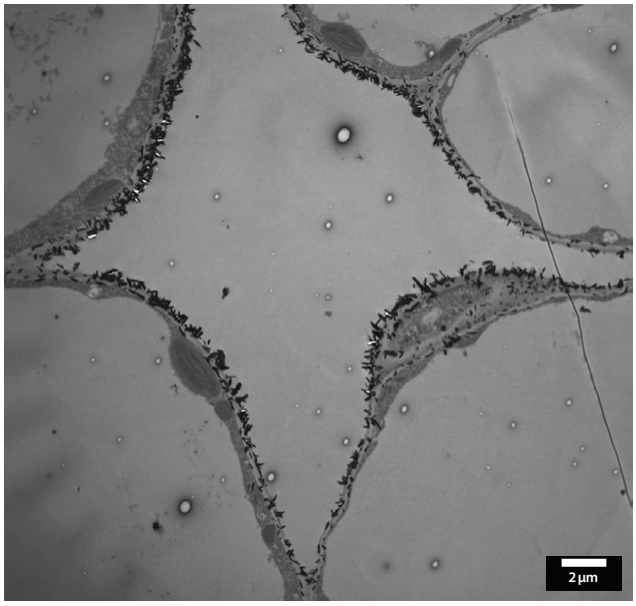
From herbaceous plant



STEM 10 kV: Central Leaf Vein

Section on formvar

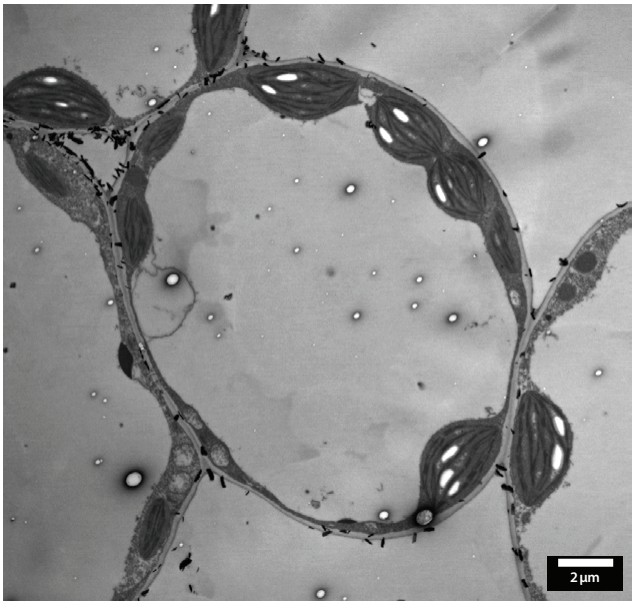
From herbaceous plant



STEM 10 kV: Central Leaf Vein

Section on formvar

From herbaceous plant

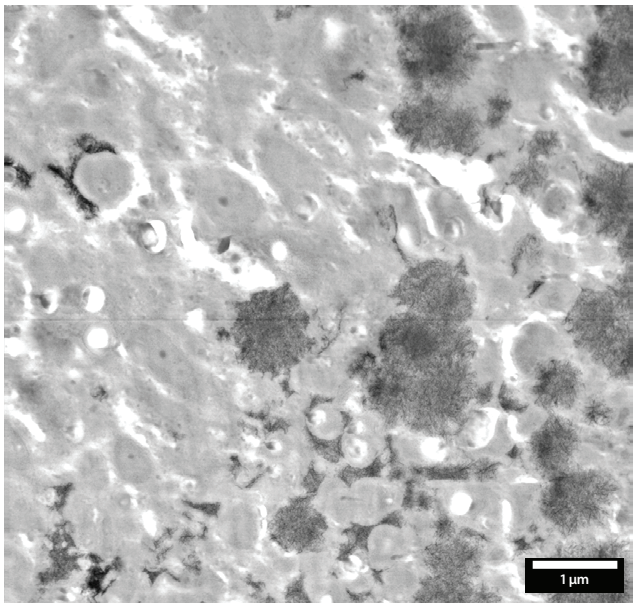


STEM 10 kV: Central Leaf Vein

Section on formvar

From herbaceous plant

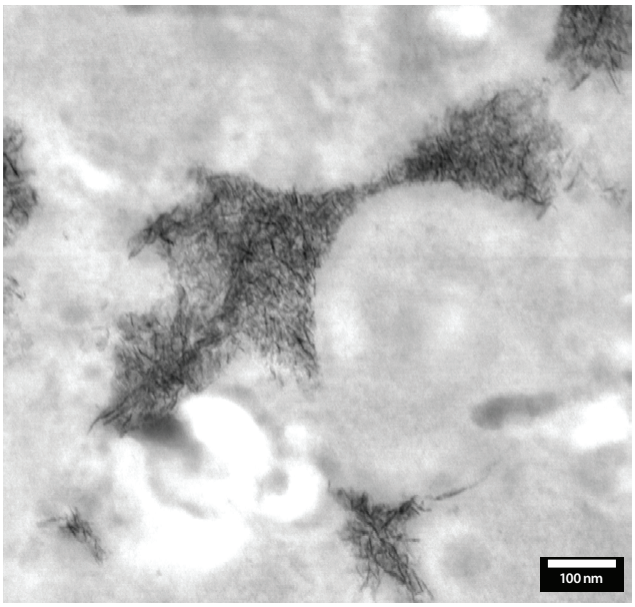
Sample courtesy of Maria Valle, Institute for Sustainable Plant Protection



STEM: Bacteria and Crystals

Stained section

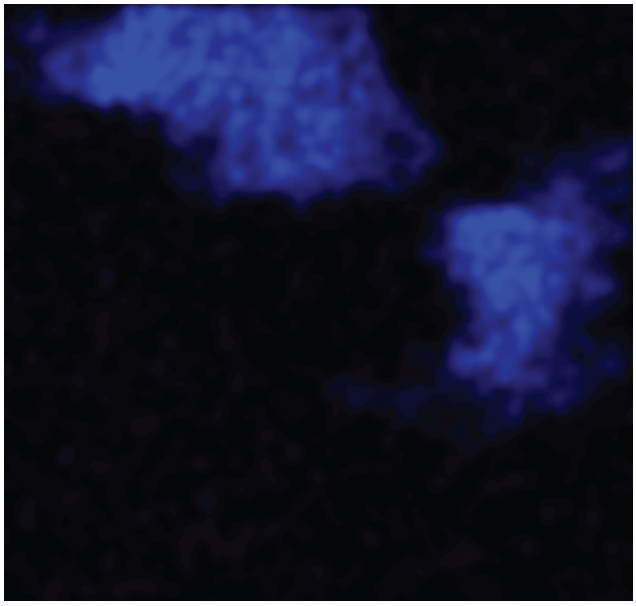
View of a colony with cross section profiles of bacteria and crystalline Mn deposits



STEM: Bacteria and Crystals

Stained section

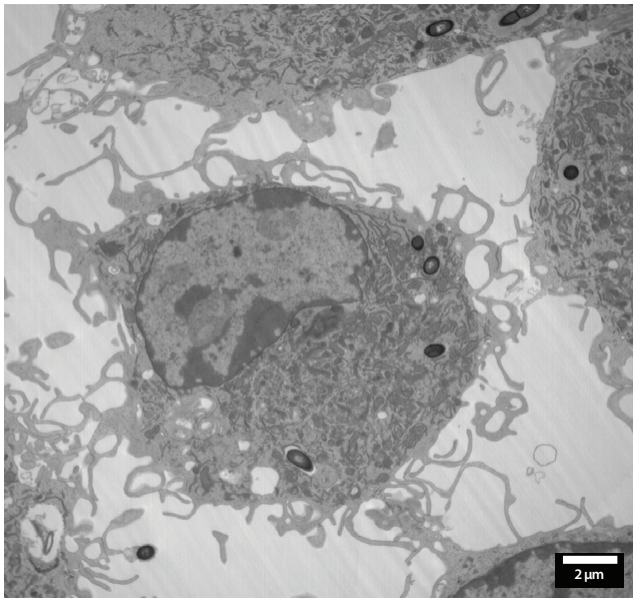
Cross section profiles of bacteria and crystalline Mn deposits



EDS: Bacteria and Crystals

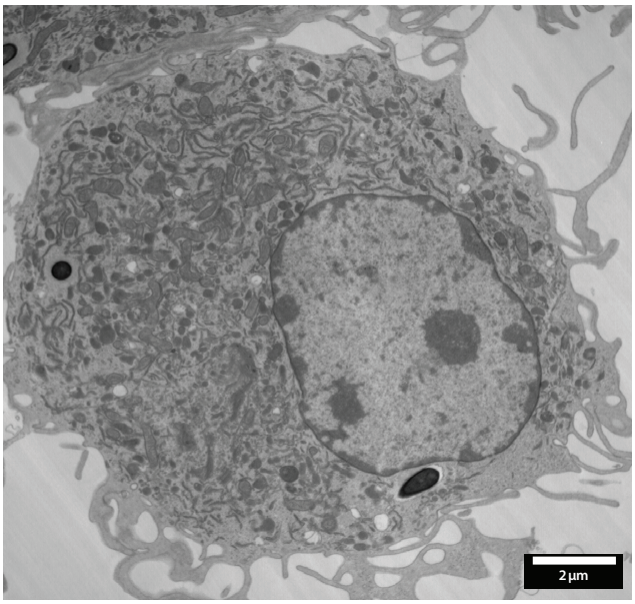
Stained section

Mn mapping



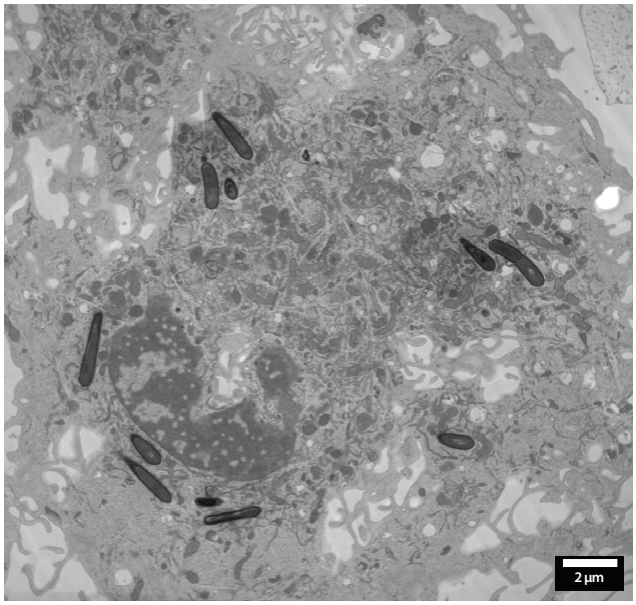
TEM: Fibroblasts and Bacteria

Stained section



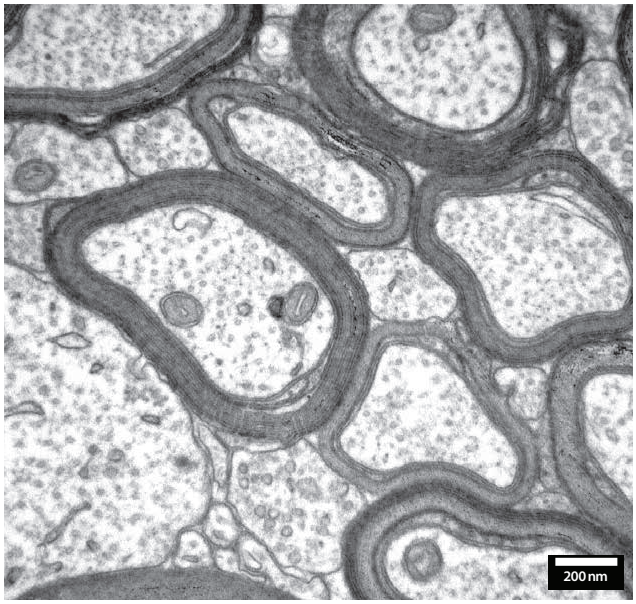
TEM: Fibroblasts and Bacteria

Stained section



TEM: Fibroblasts and Bacteria

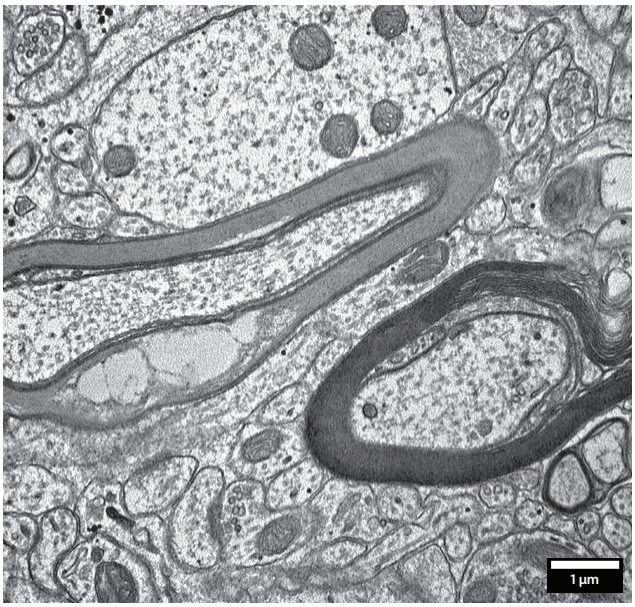
Stained section



TEM: Mouse brain

Stained section

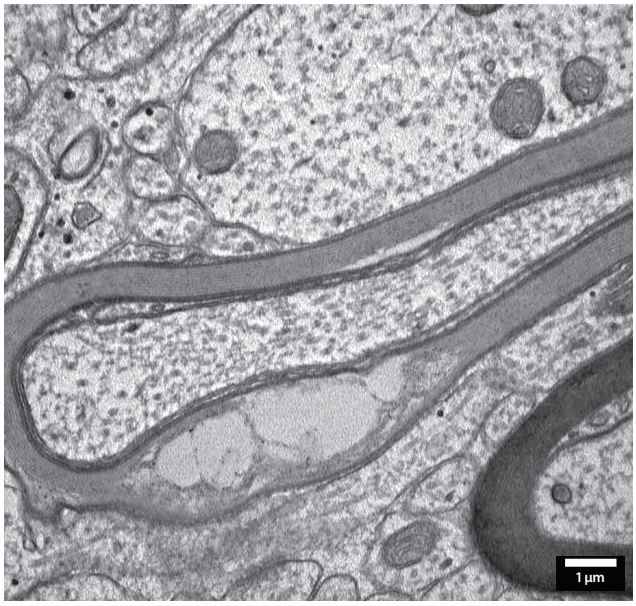
Neural tissue



TEM: Mouse brain

Stained section

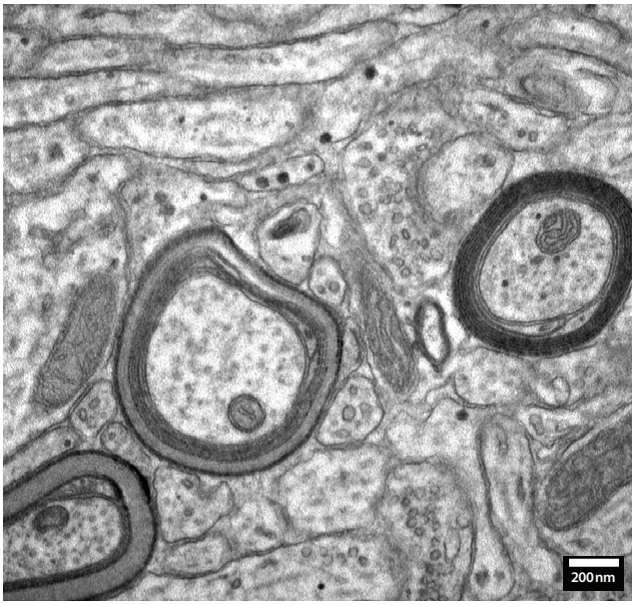
Neural tissue including axons with and without myelin sheath



TEM: Mouse brain

Stained section

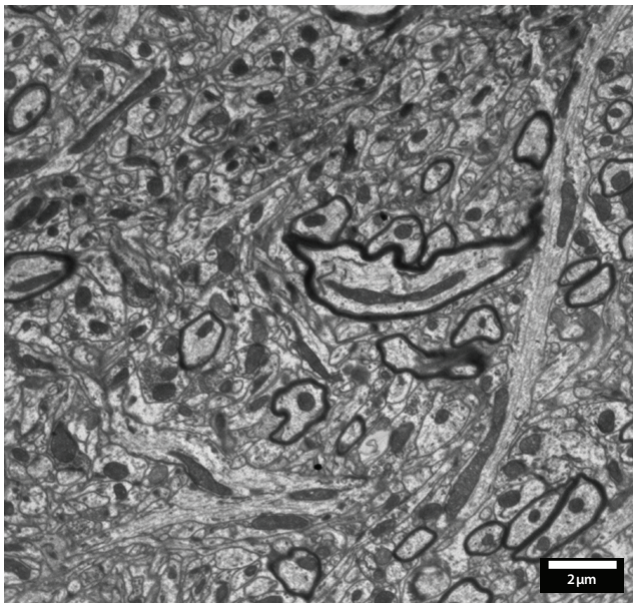
Neural tissue



TEM: Mouse brain

Stained section

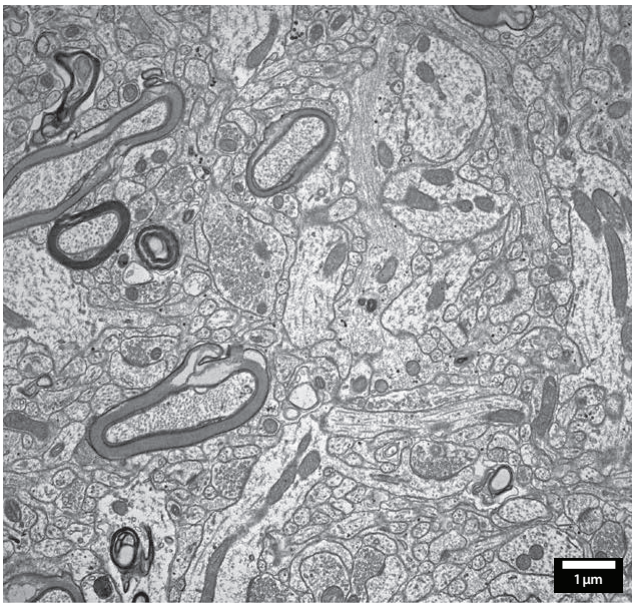
Stained section of a neural tissue surrounded with mitochondria-containing myelinated axon



TEM: Myelinated Axons

Stained section

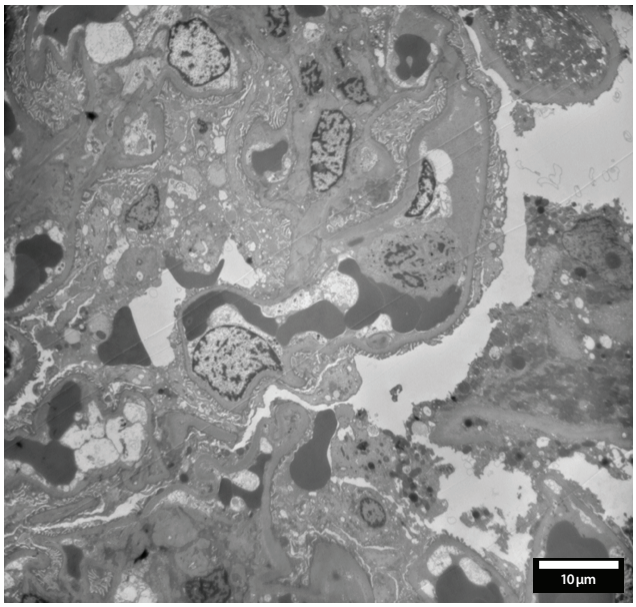
Nerve tissue contrasted by 1% LC, fixed by 1.5% potassium ferrocyanide



TEM: Mouse brain

Stained section

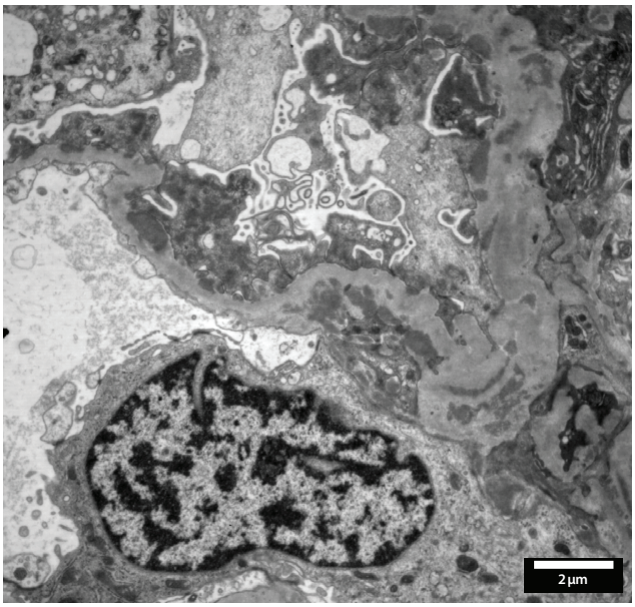
Neural tissue



TEM: Kidney

Stained section

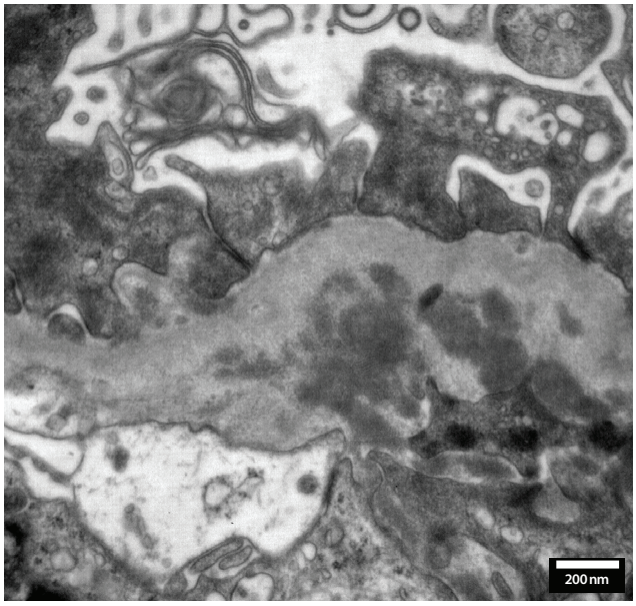
90nm section, block stained by UAc, post-fixed by OsO_4



TEM: Kidney

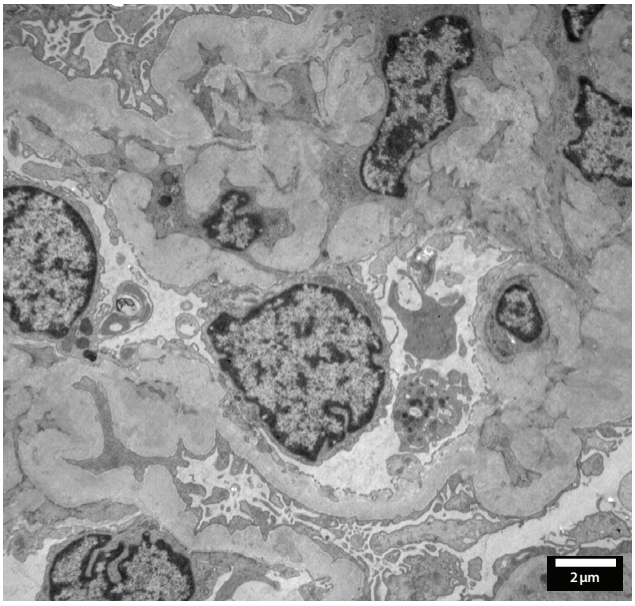
Stained section

Epithel and endothel cells with apparent cell cores



TEM: Kidney

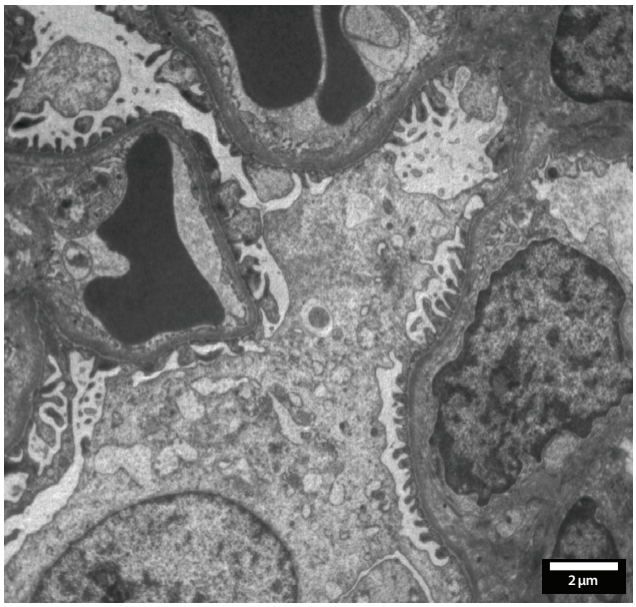
Stained section



TEM: Kidney

Stained section

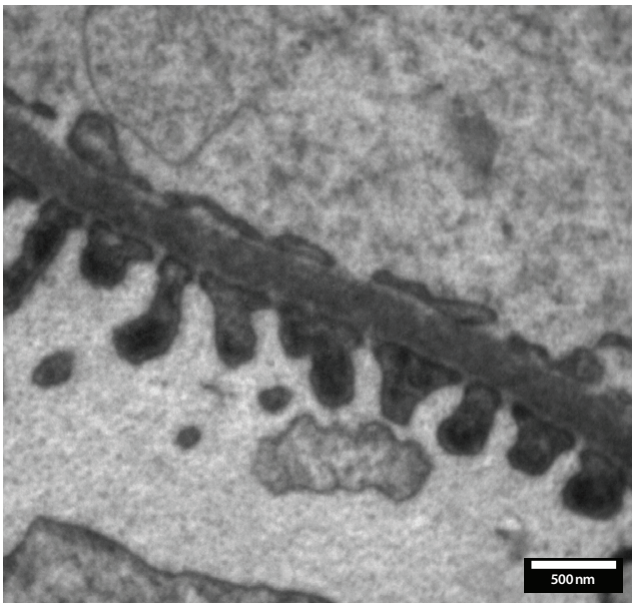
Epithel and endothel cells with apparent cell cores



TEM: Kidney

Stained section

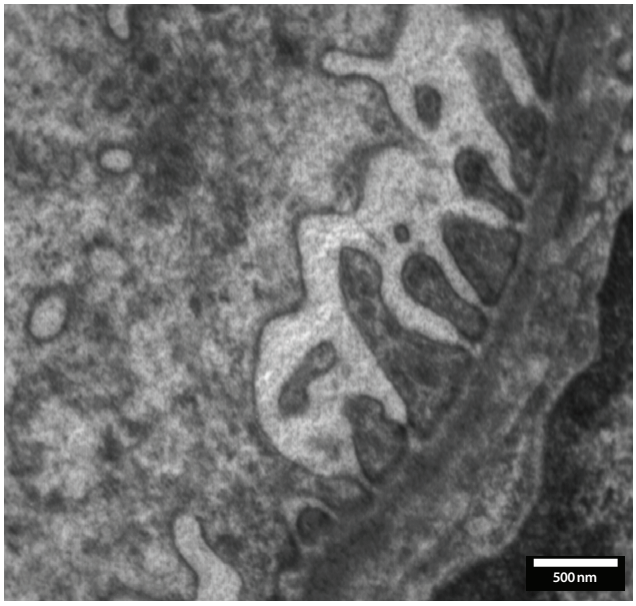
Point of interest: podocytes



TEM: Kidney

Stained section

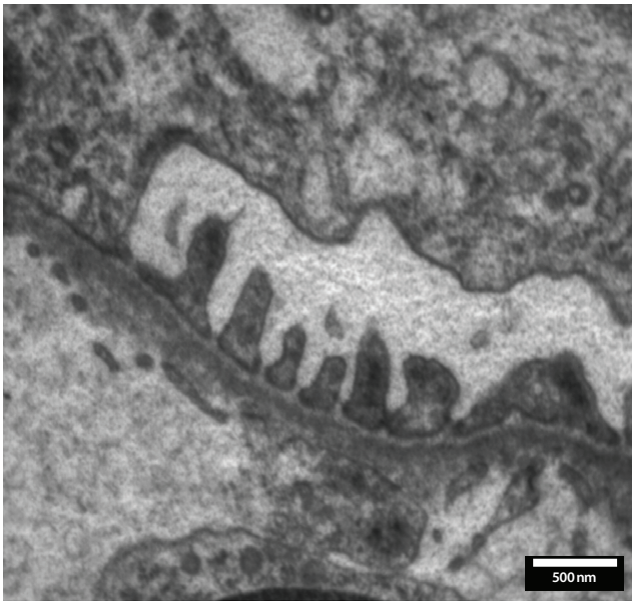
Point of interest: podocytes with details of pedicles



TEM: Kidney

Stained section

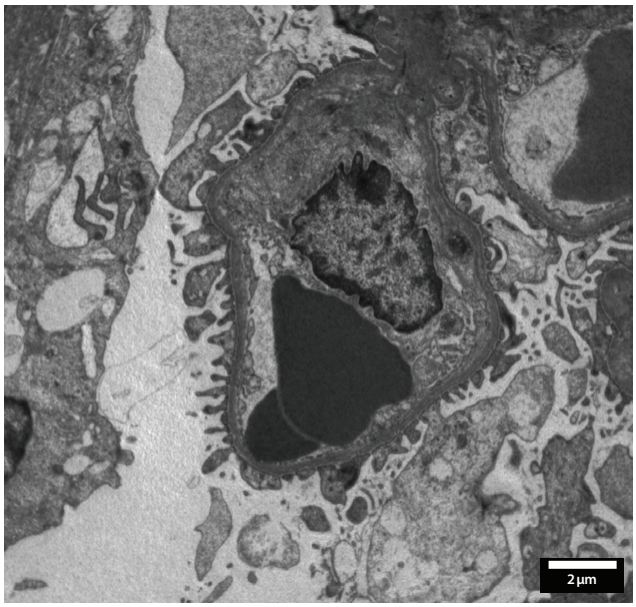
Point of interest: podocytes with details of pedicles



TEM: Kidney

Stained section

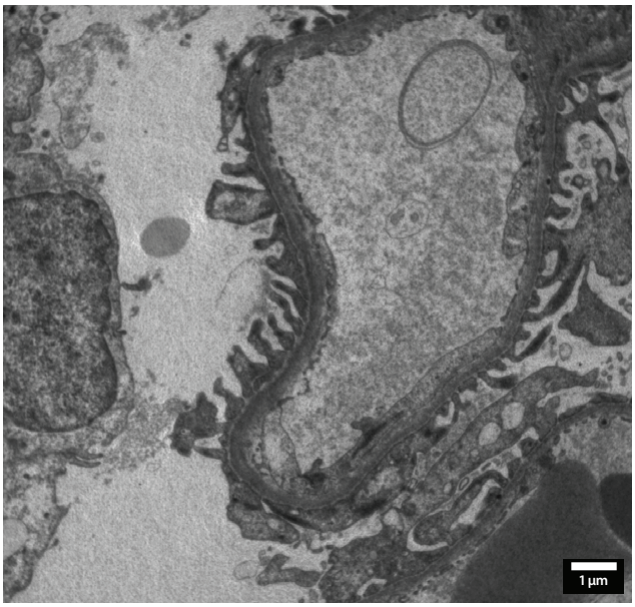
Point of interest: podocytes with details of pedicles



TEM: Kidney

Stained section

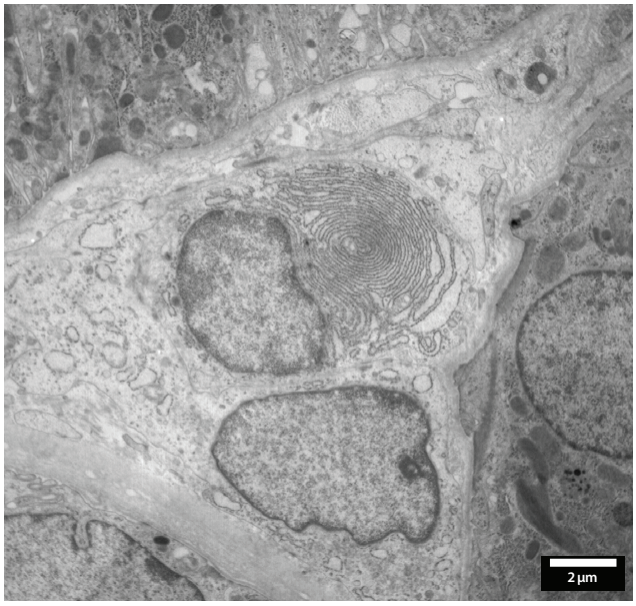
Point of interest: podocytes transsection showing cell nucleus in the proximity of erythrocytes in capillary



TEM: Kidney

Stained section

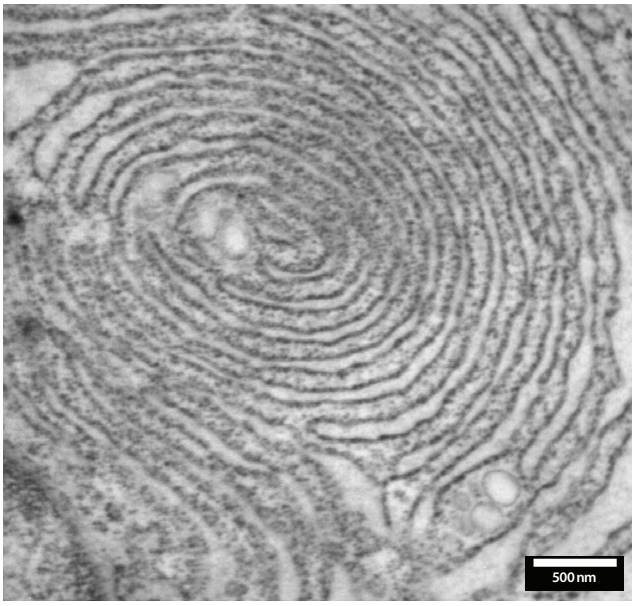
Point of interest: podocytes



TEM: Kidney

Stained section

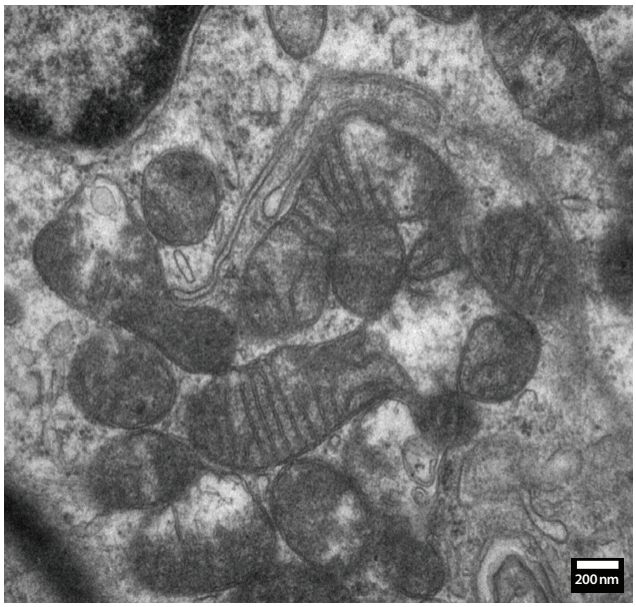
Point of interest: granular endoplasmatic reticulum location in the proximity of epithelial cell nucleus



TEM: Kidney

Stained section

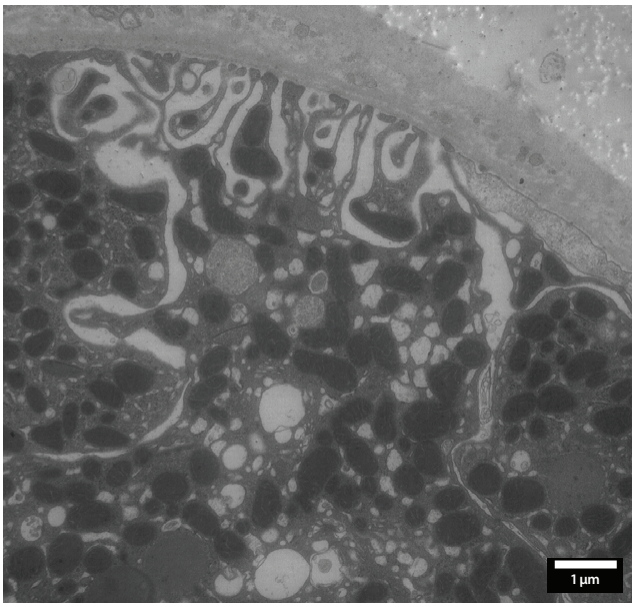
Point of interest: detail of granular endoplasmatic reticulum



TEM: Kidney

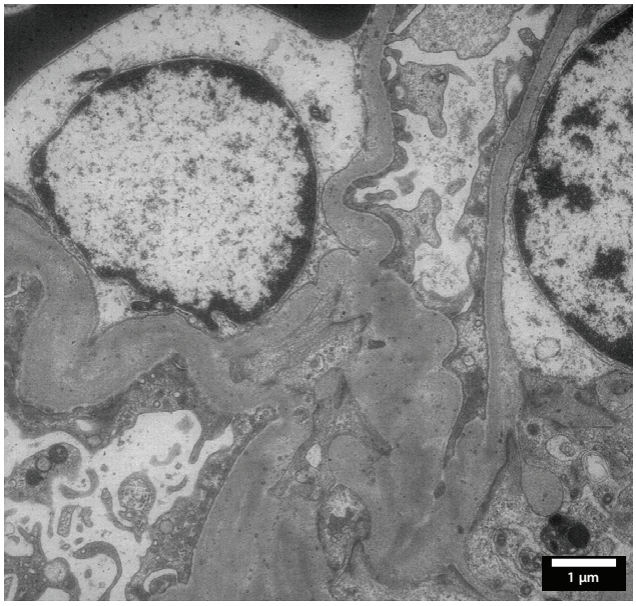
Stained section

Point of interest: mitochondria



TEM: Kidney

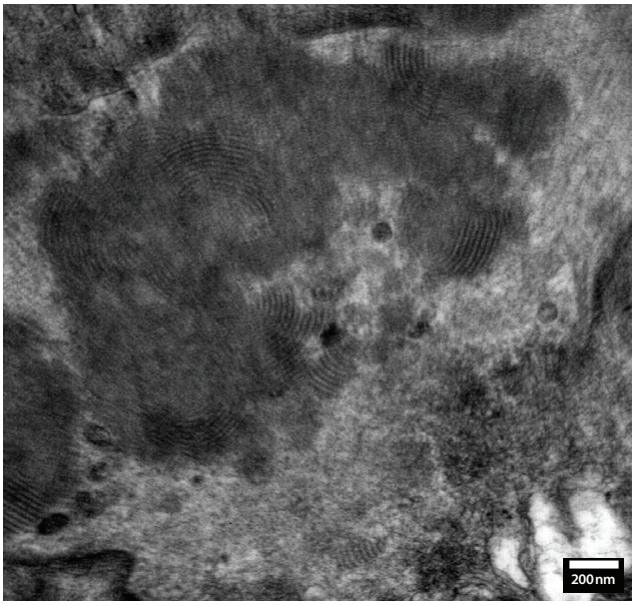
Stained section



TEM: Kidney

Stained section

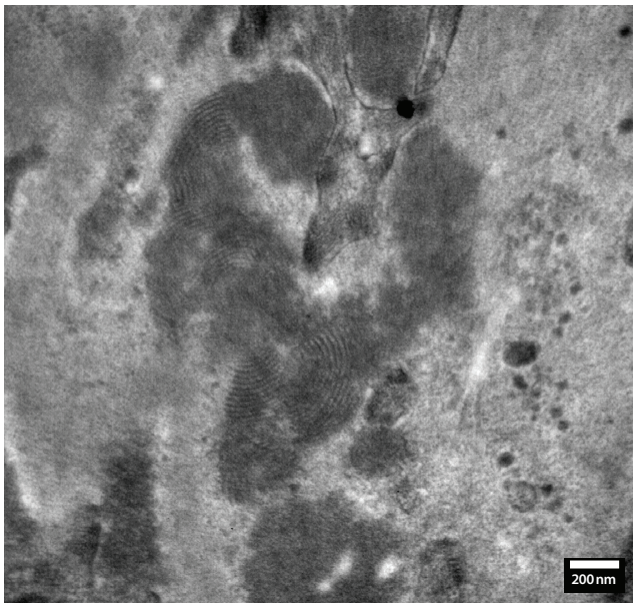
Point of interest: basal membrane of glomerulus



TEM: Kidney

Stained section

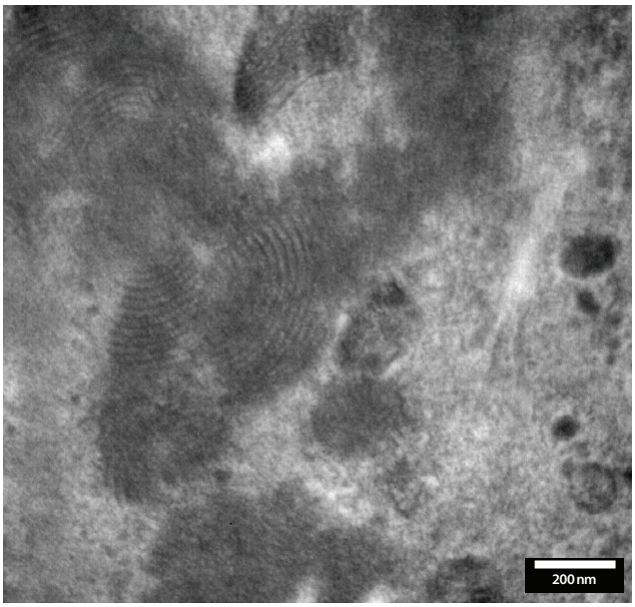
Point of interest: fingerprint structure



TEM: Kidney

Stained section

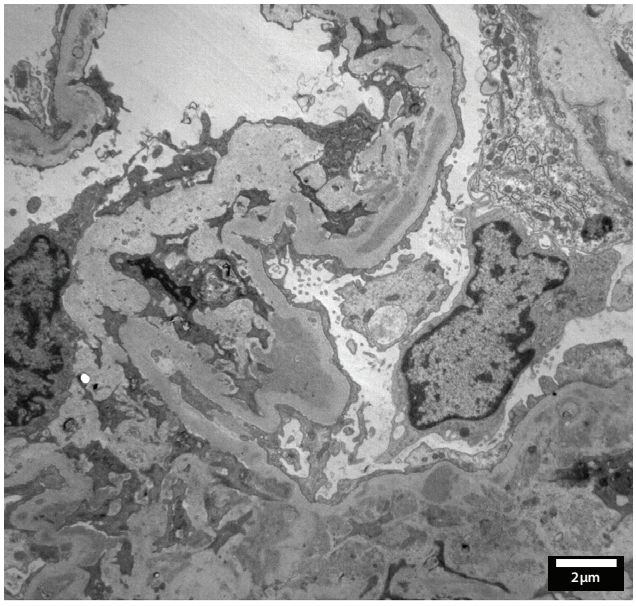
Point of interest: fingerprint structure



TEM: Kidney

Stained section

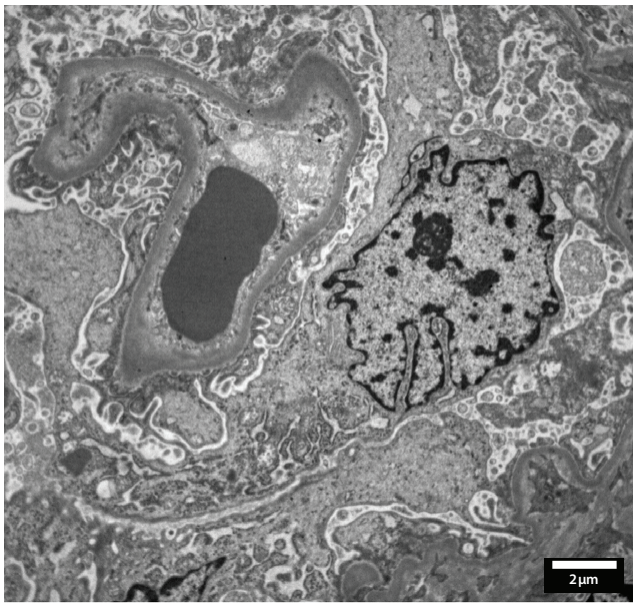
Point of interest: fingerprint structure



Kidney

Stained section

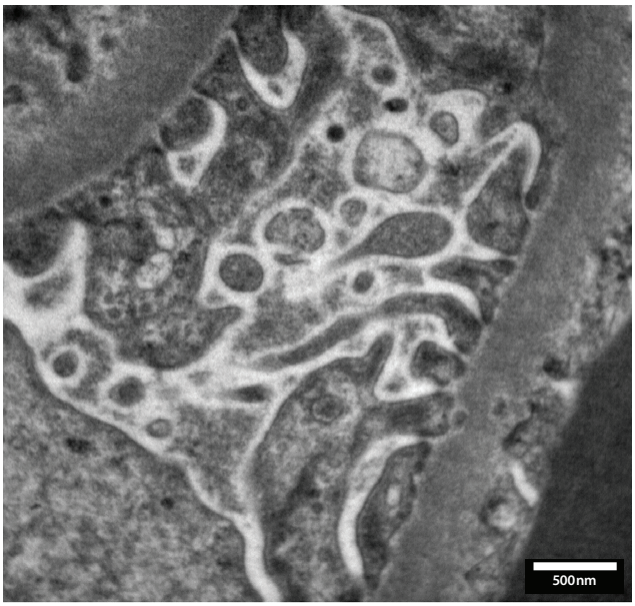
Point of interest: tubulus pathology



TEM: Kidney

Stained section

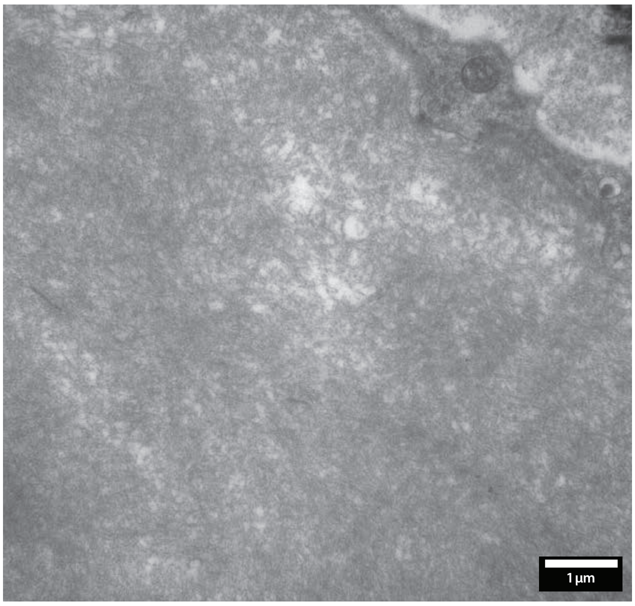
Point of interest: section of renal corpuscle with capillary and podocyte



TEM: Kidney

Stained section

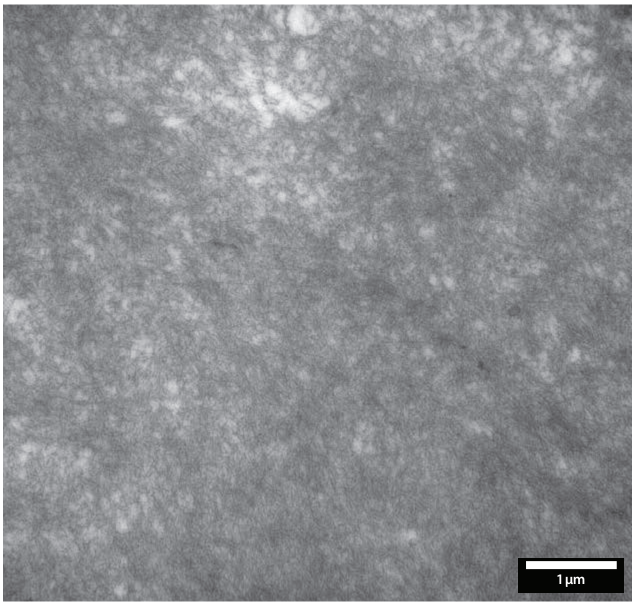
Point of interest: podocyte with details of pedicles



TEM: Kidney

Stained section

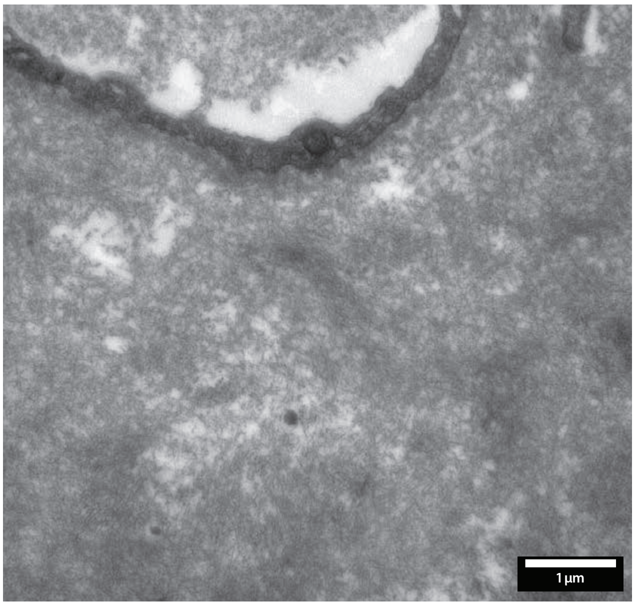
Point of interest: amyloid nephropathy



TEM: Kidney

Stained section

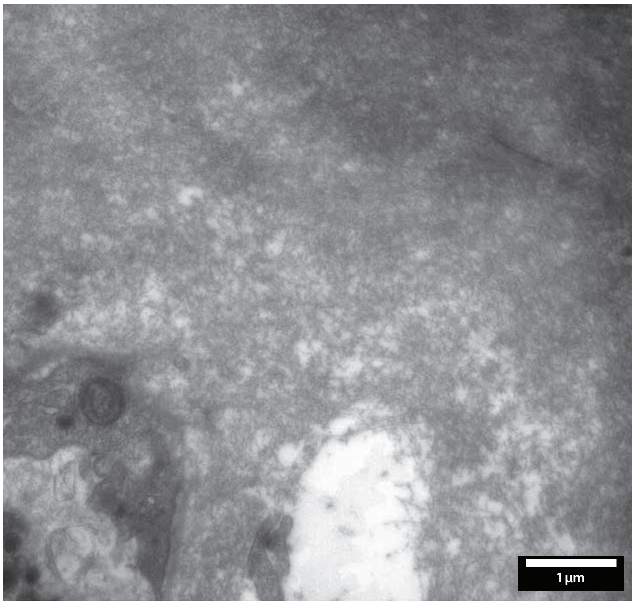
Point of interest: amyloid nephropathy



TEM: Kidney

Stained section

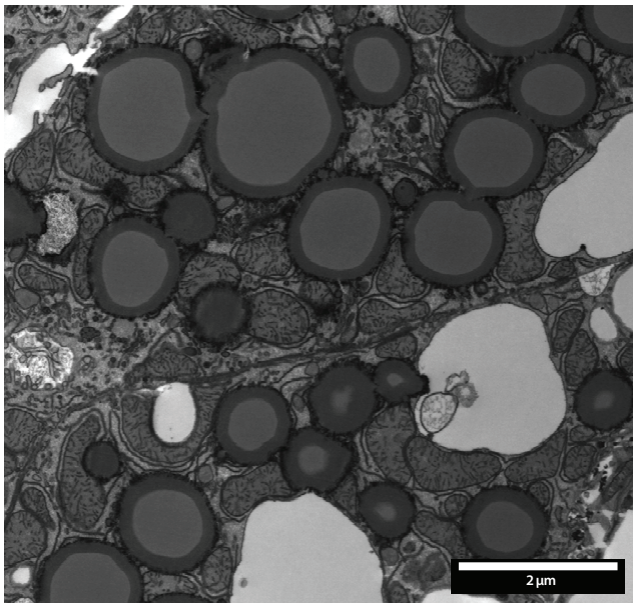
Point of interest: amyloid nephropathy



TEM: Kidney

Stained section

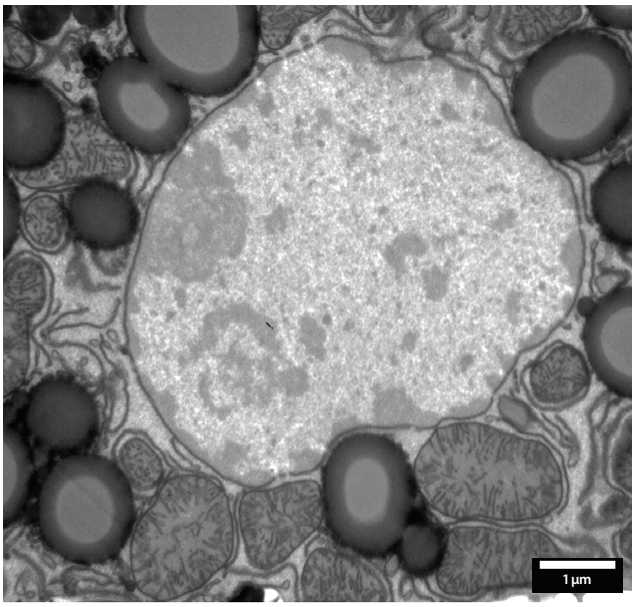
Point of interest: amyloid nephropathy



STEM 10 kV: Mouse Liver

Stained section

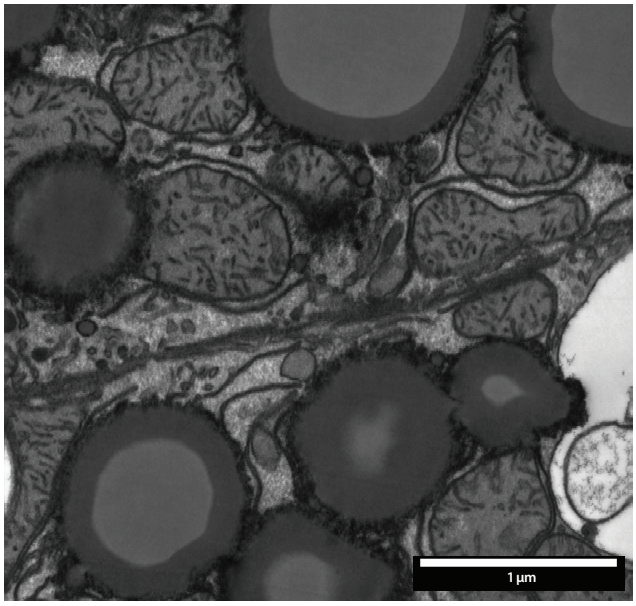
1% SM/En Acetates.
Point of interest: hepatocyte nucleus surrounded by droplets of fat



TEM: Mouse Liver

Stained section

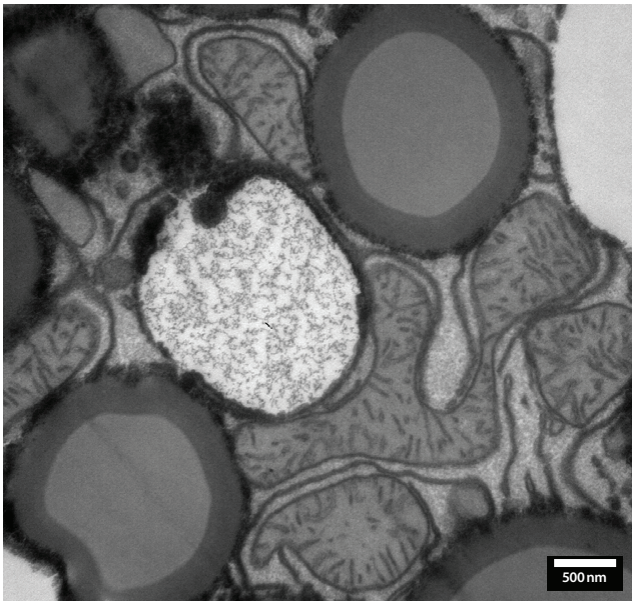
1% SM/En Acetates



STEM 10 kV: Mouse Liver

Stained section

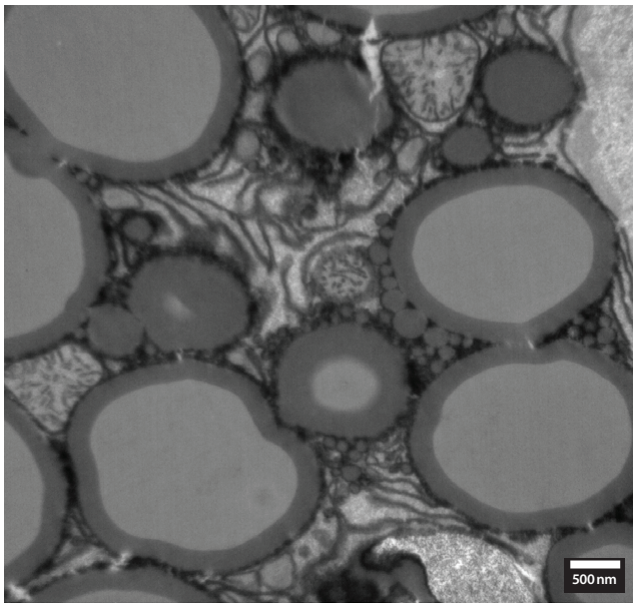
1% SM/En Acetates
Point of interest: mitochondria of hepatocyte surrounded by droplets of fat



TEM: Mouse Liver

Stained section

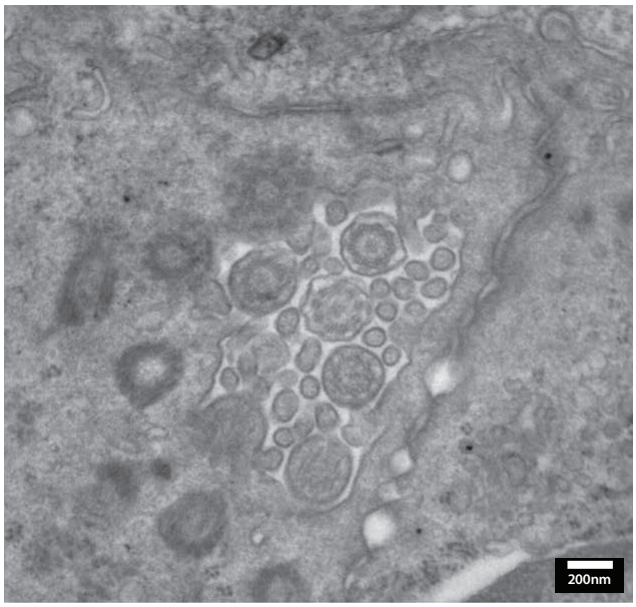
Point of interest: mitochondria of hepatocyte surrounded by droplets of fat



TEM: Mouse Liver

Stained section

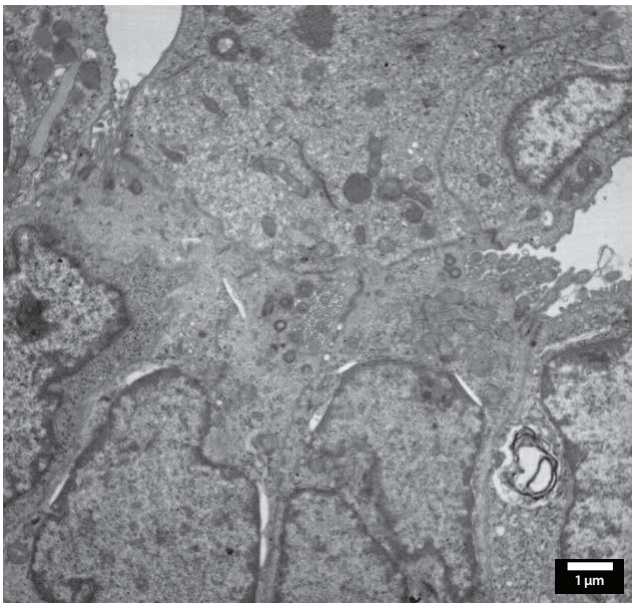
1% SM/En Acetates



TEM: Lungs

Stained section

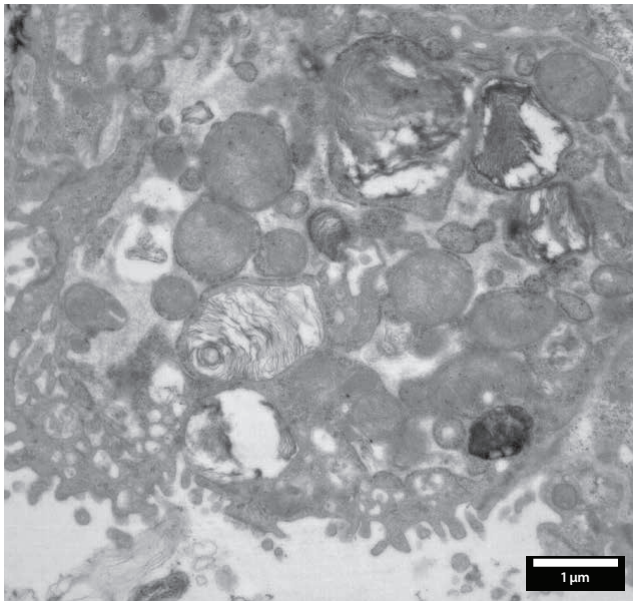
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: cilia of epithel cells



TEM: Lungs

Stained section

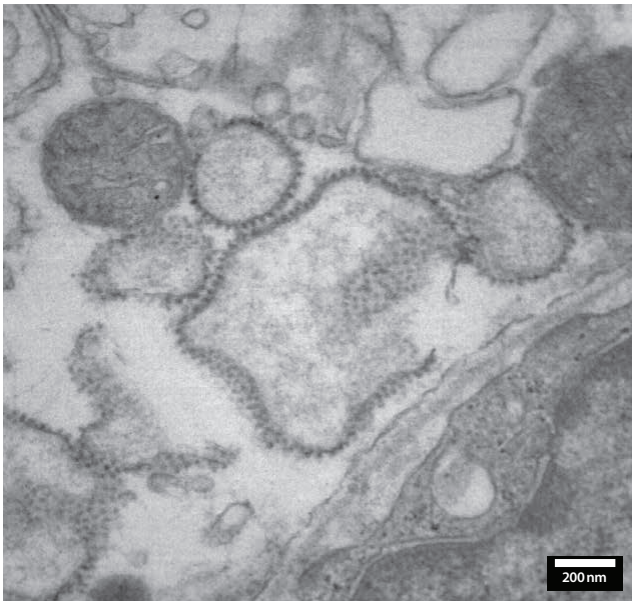
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: cross-section of epithel cells with apparent multiple nuclei



TEM: Lungs

Stained section

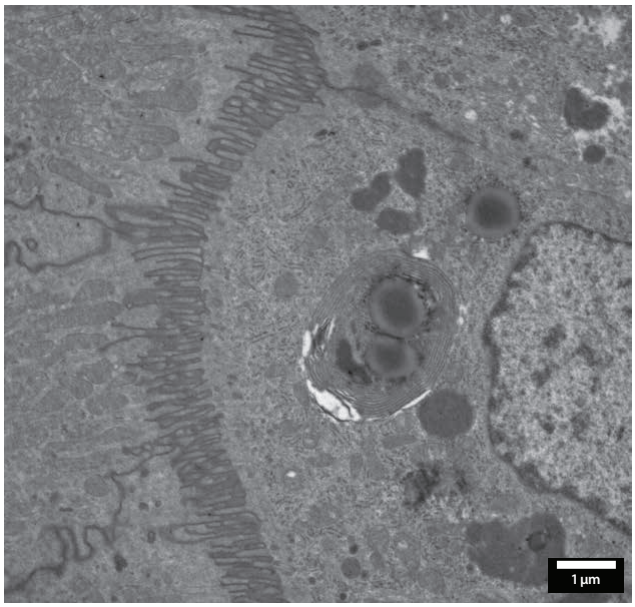
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: cross-section of bronchioles with cilia



TEM: Lungs

Stained section

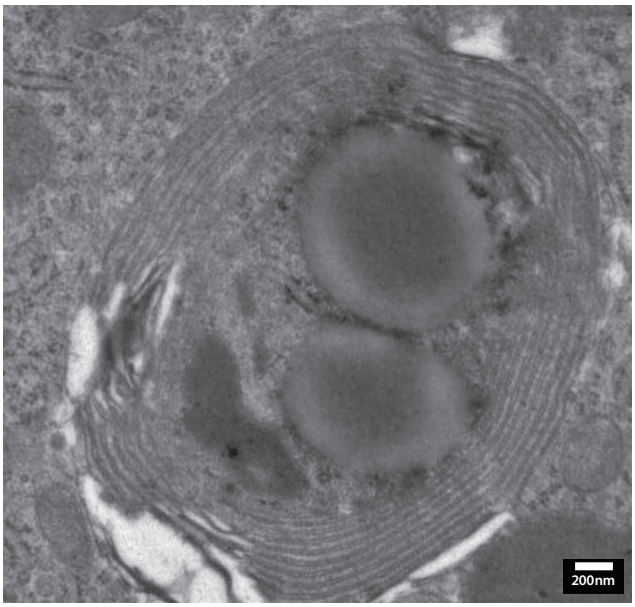
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: cross-section of lungs tissue with visible basal membrane of epithel cell.



TEM: Lungs

Stained section

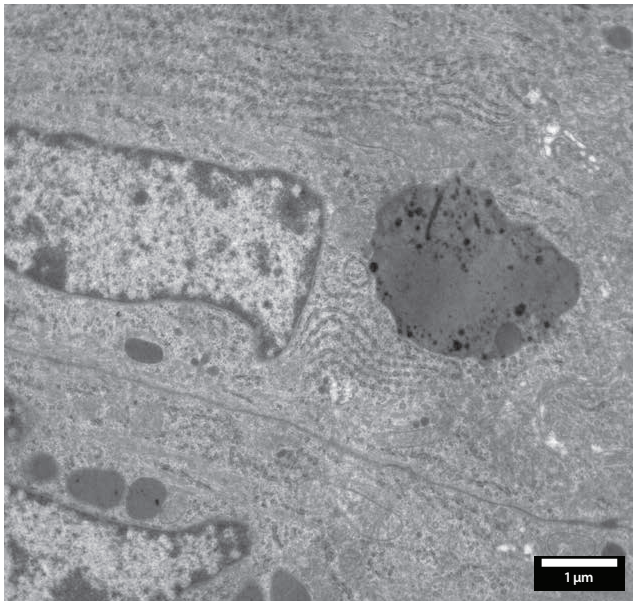
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: cilia brush border



TEM: Lungs

Stained section

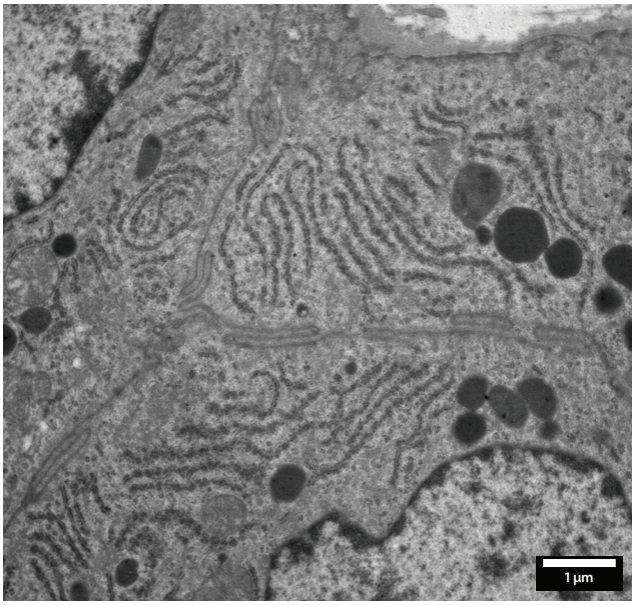
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: granular endoplasmatic reticulum



TEM: Lungs

Stained section

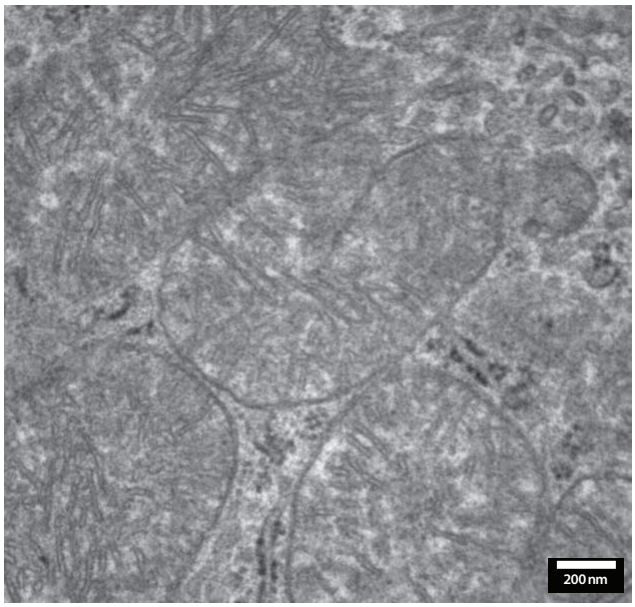
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: endoplasmatic reticulum cisternae surrounding the cell nucleus



TEM: Lungs

Stained section

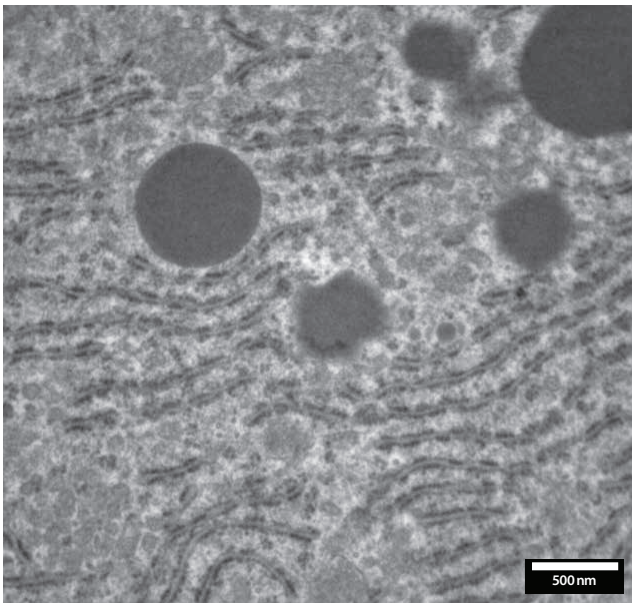
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: granular endoplasmatic reticulum cisternae



TEM: Lungs

Stained section

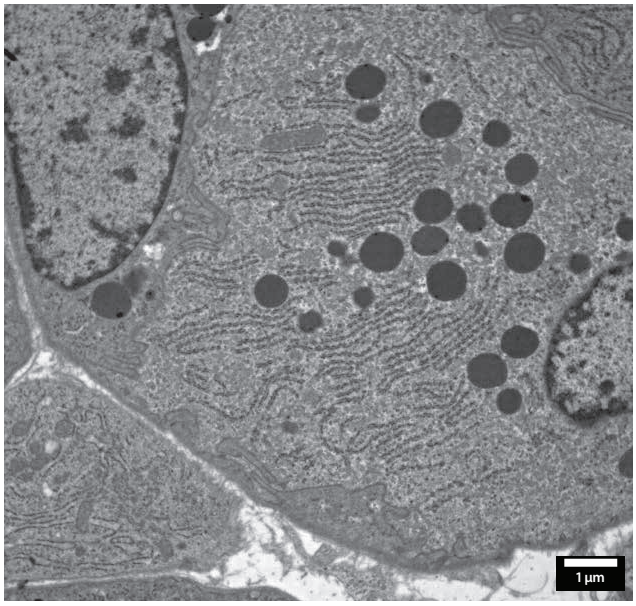
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: mitochondria with visible cristae



TEM: Lungs

Stained section

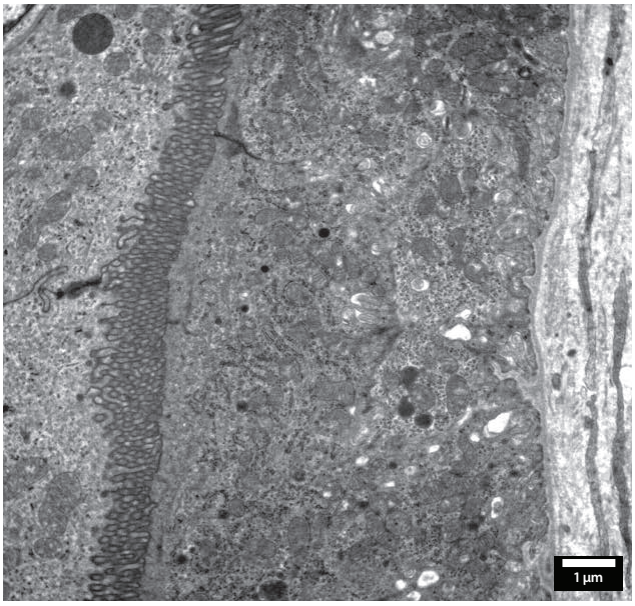
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Detail of GER: cisterns and fat droplets



TEM: Lungs

Stained section

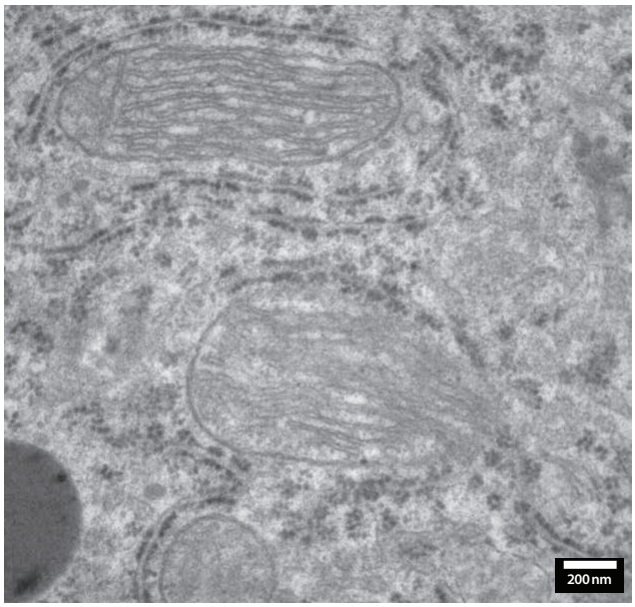
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Cross-section of lung cell: apparent granular endoplasmatic reticulum, cell nuclei and fat droplets



TEM: Lungs

Stained section

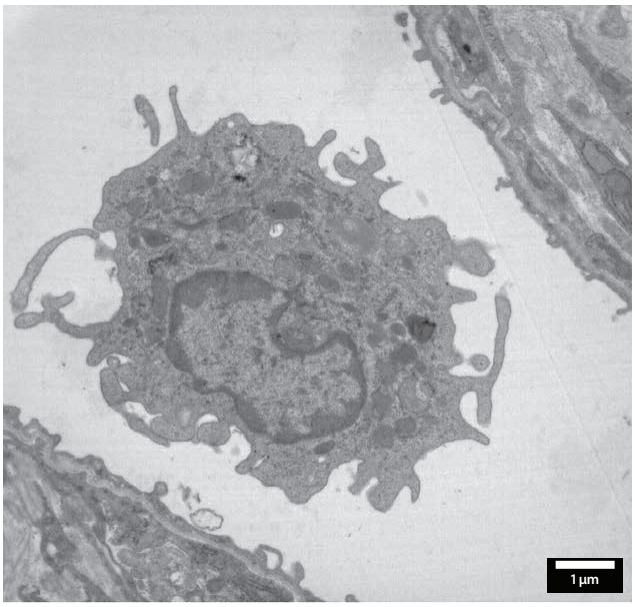
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon.
Point of interest: cilia brush border



TEM: Lungs

Stained section

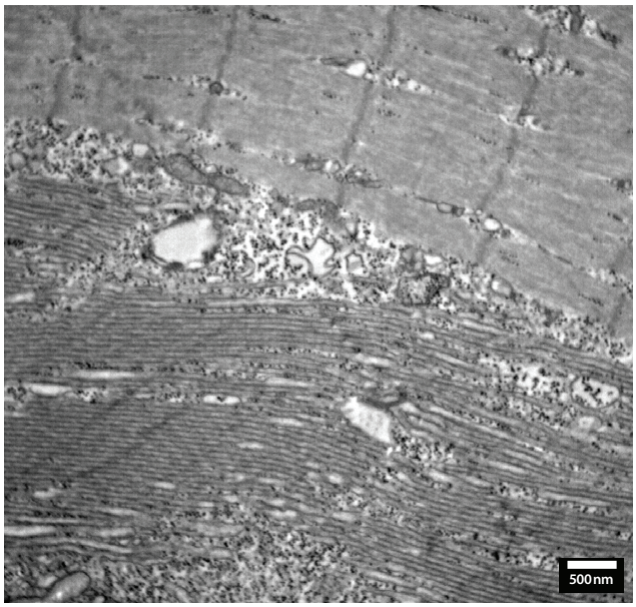
Epon embedded, 85 nm section, chemically fixed, with UAc/Pb staining and coated with 2nm carbon. Point of interest: mitochondria



TEM: Lungs

Stained section

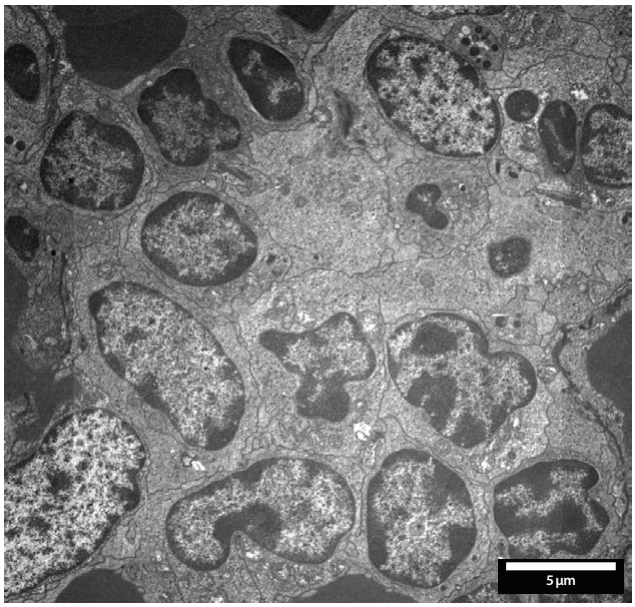
Epon embedded, 85 nm section, chemically fixed, with Uranyless/Pb staining and coated with 2nm carbon. Point of interest: cross-section of free cell in lung tissue



TEM: Muscle

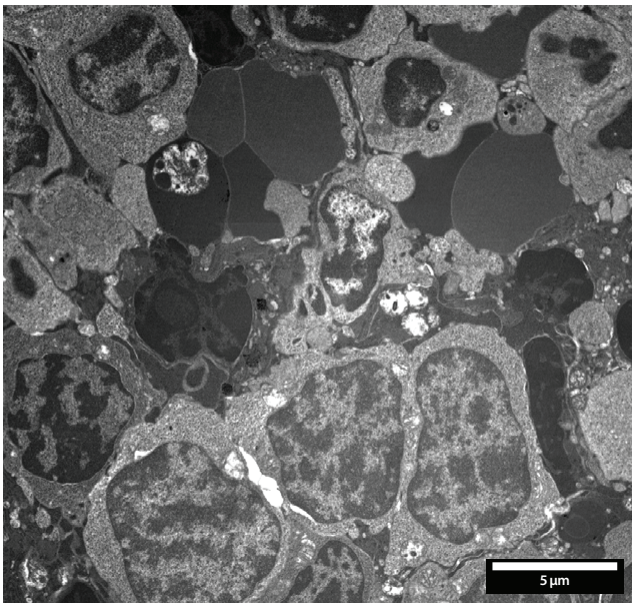
Unstained section

Structure of muscle cell: visible Z-lines, actin and myosin filaments



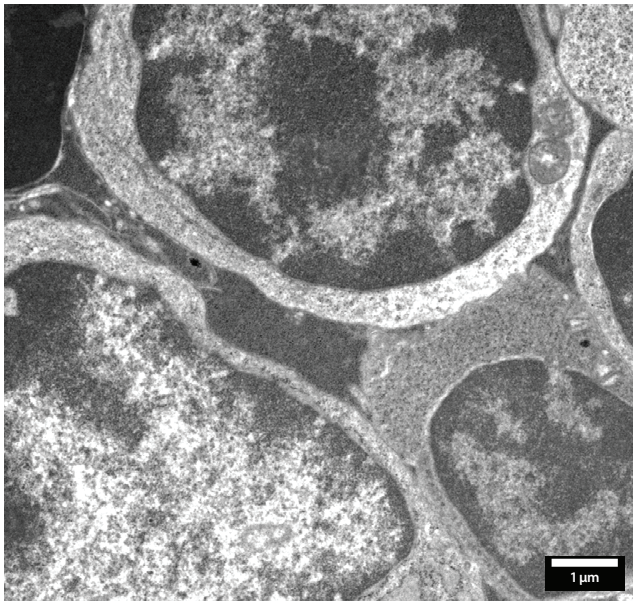
STEM 15 kV: Spleen

Stained section, 70 nm



STEM 15 kV: Spleen

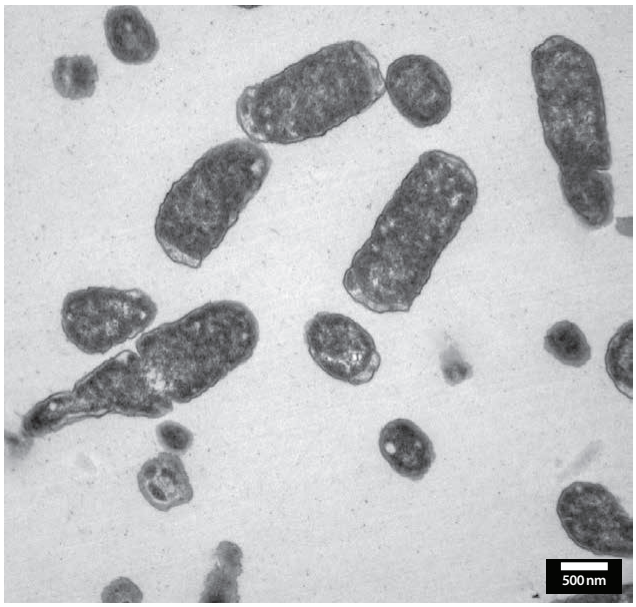
Stained section, 70 nm



STEM 15 kV: Spleen

Stained section, 70 nm

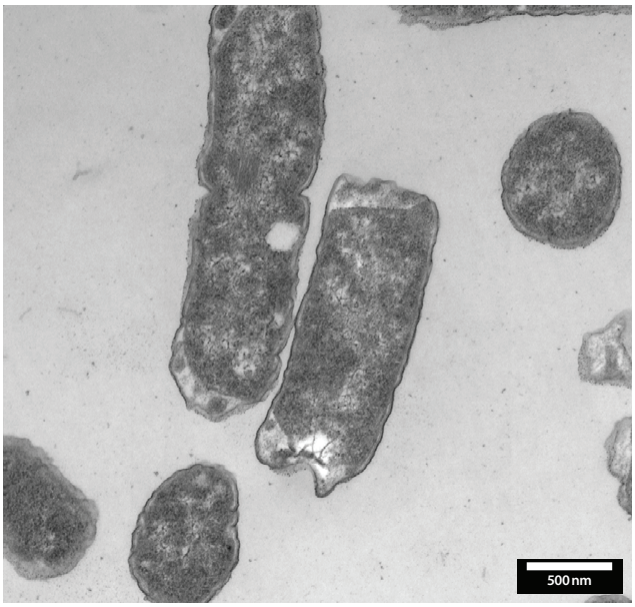
Sample courtesy of Dobromila Klemová, Faculty of Medicine Masaryk University



TEM: E. coli

Ultrathin section

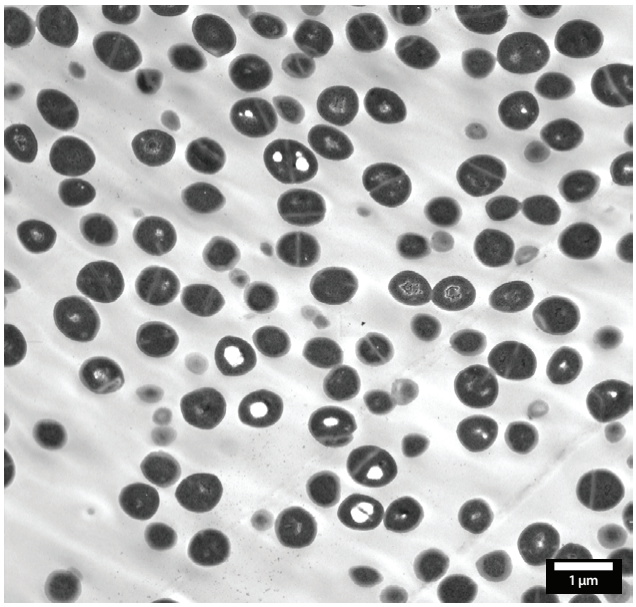
Point of interest: Inner structure, size and shape



STEM: E. coli

Ultrathin section

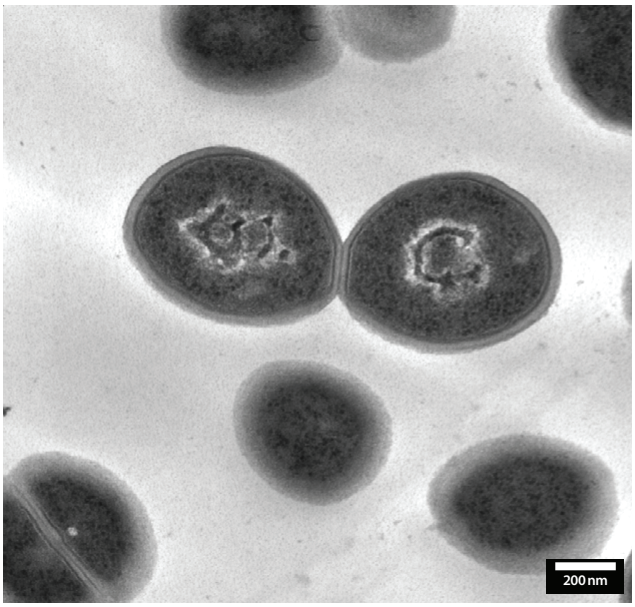
Point of interest: Inner structure, size and shape



STEM: S. aureus

Ultrathin section

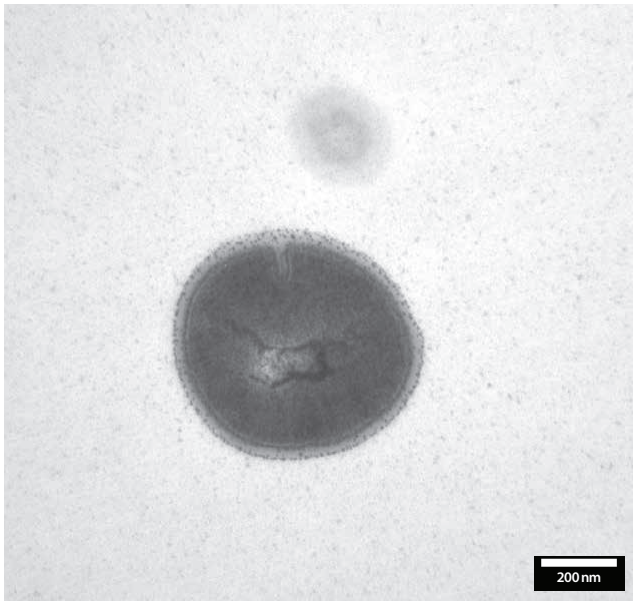
Point of interest: Inner structure, size and shape



STEM: S. aureus

Ultrathin section

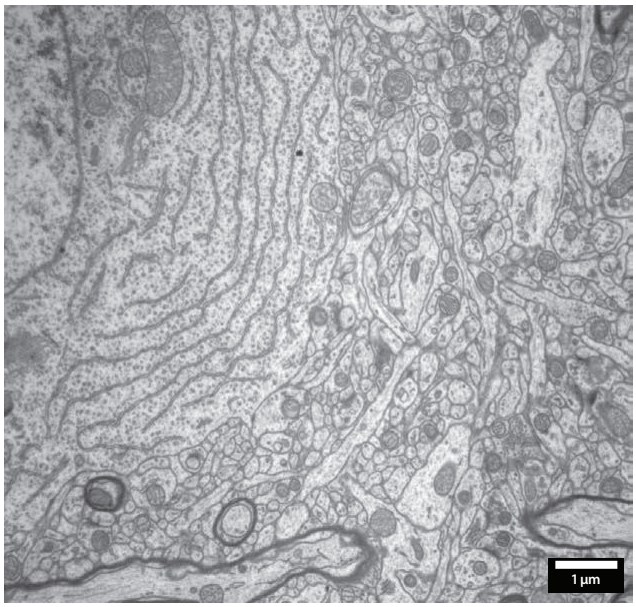
Point of interest: Inner structure, size and shape



TEM: S. aureus

Ultrathin section

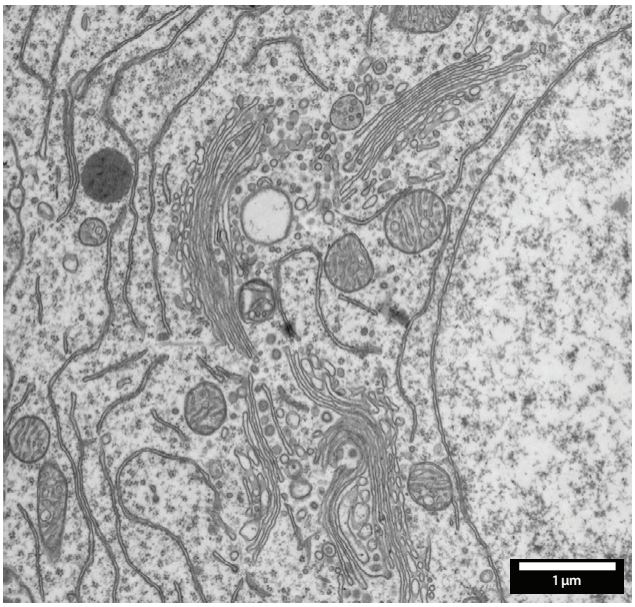
Point of interest: Inner structure, size and shape



STEM: Brain

Ultrathin stained section with reduced concentration of OsO_4 (0.2 %)

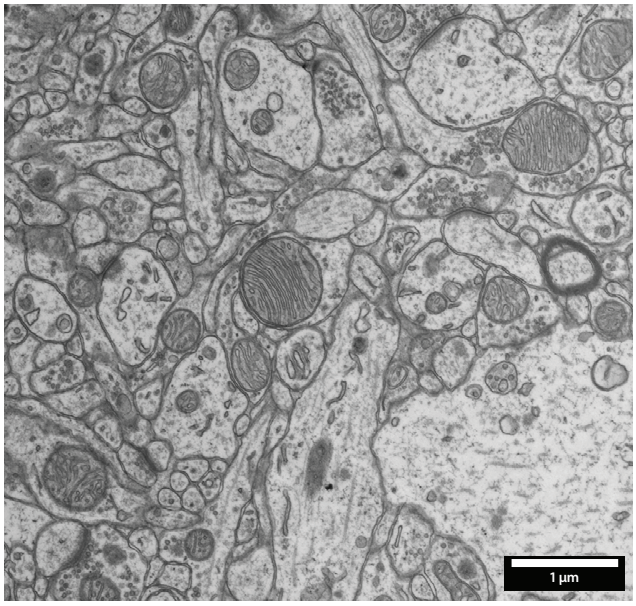
Point of interest: ultrastructure of neural tissue



STEM: Brain

Ultrathin stained section with reduced concentration of OsO_4 (0.2 %)

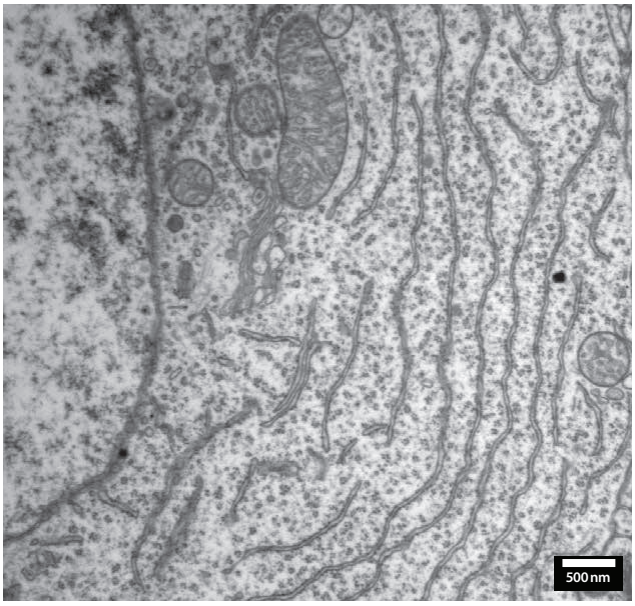
Point of interest: ultrastructure of neural tissue



TEM: Brain

Ultrathin stained section with reduced concentration of OsO_4 (0.2 %)

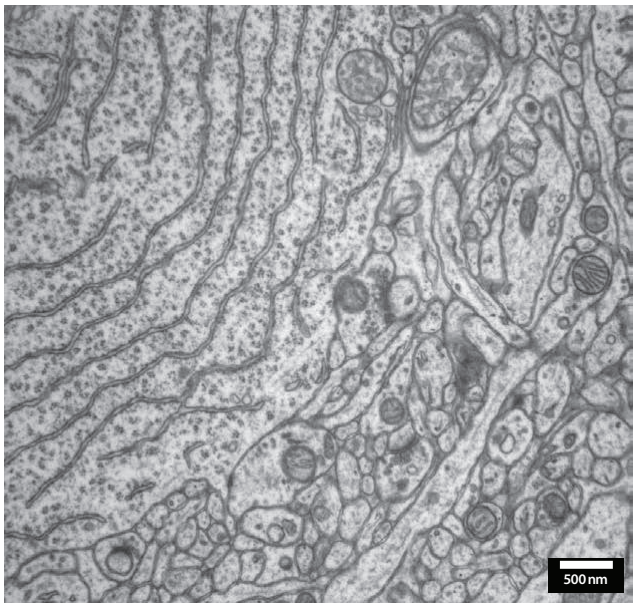
Point of interest: ultrastructure of neural tissue



TEM: Brain

Ultrathin stained section with reduced concentration of OsO_4 (0.2 %)

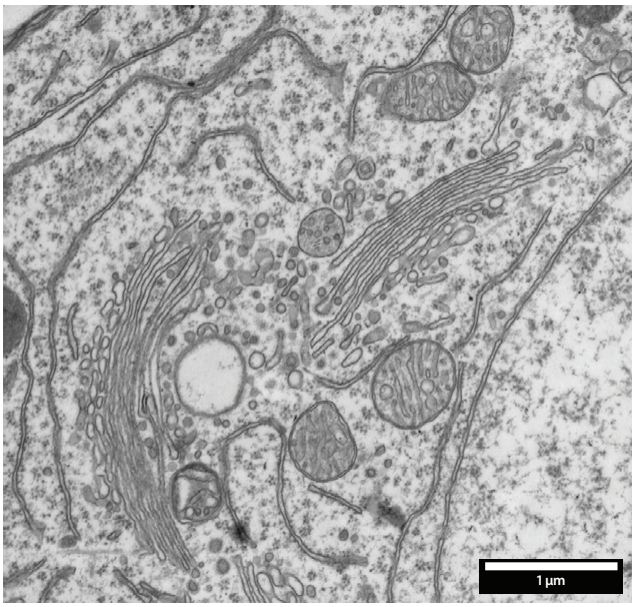
Point of interest: rough endoplasmatic reticulum



TEM: Brain

Ultrathin stained section with reduced concentration of OsO_4 (0.2 %)

Point of interest: rough endoplasmatic reticulum



STEM: Brain

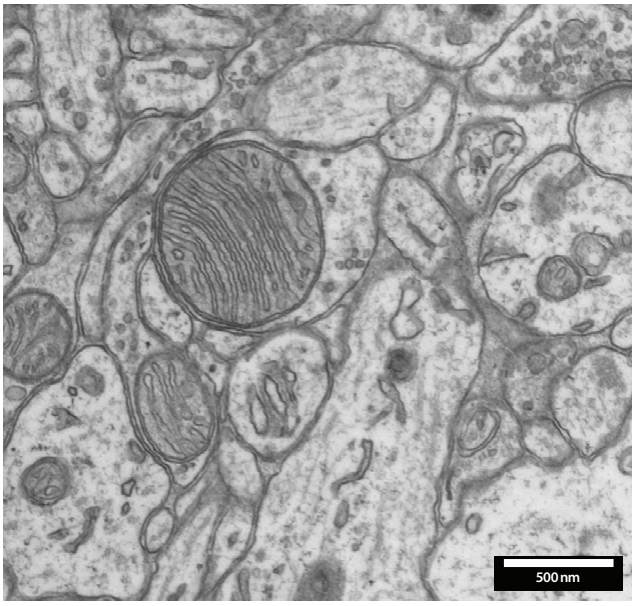
Ultrathin stained section with reduced concentration of OsO_4 (0.2 %)

Point of interest: mitochondria, rough endoplasmic reticulum, Golgi apparatus, nucleus

STEM: Brain

Ultrathin stained section with reduced concentration of OsO_4 (0.2 %)

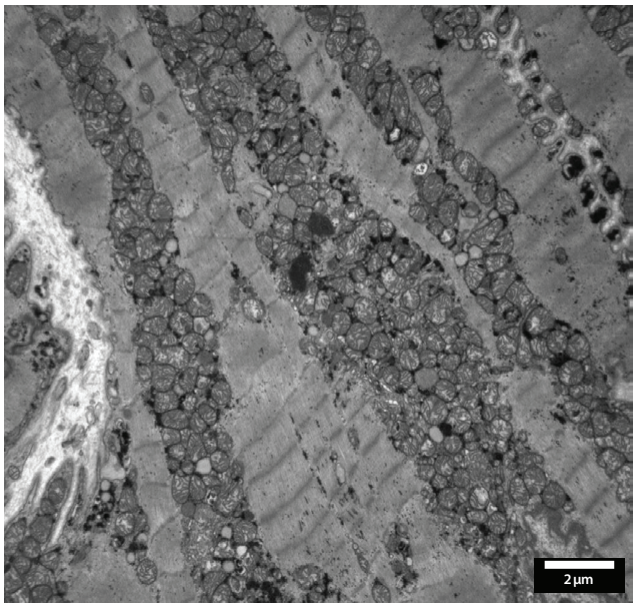
Point of interest: ultrastructure of neural tissue, myelinated axon



STEM: Brain

Ultrathin stained section with reduced concentration of OsO_4 (0.2 %)

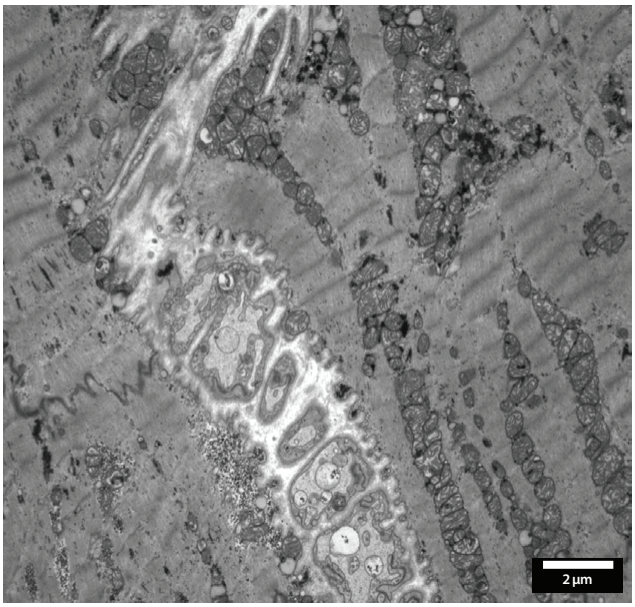
Point of interest: mitochondria



TEM: Heart Biopsy

Ultrathin section

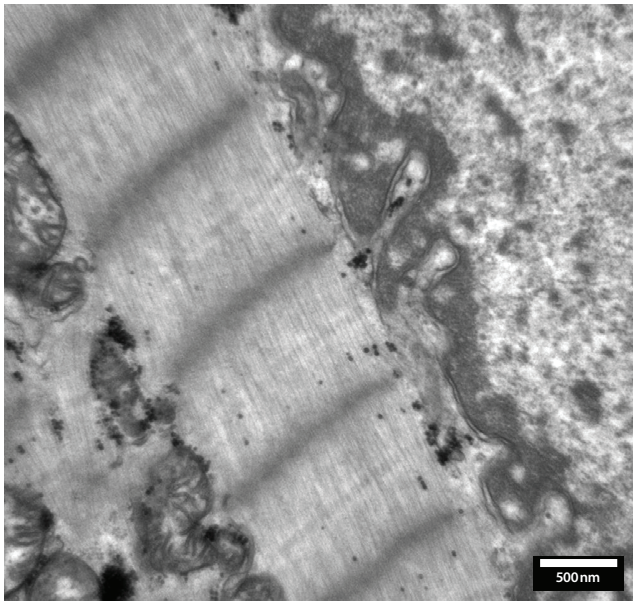
Point of interest: muscle structure including actin and myosinfilaments.



TEM: Heart Biopsy

Ultrathin section

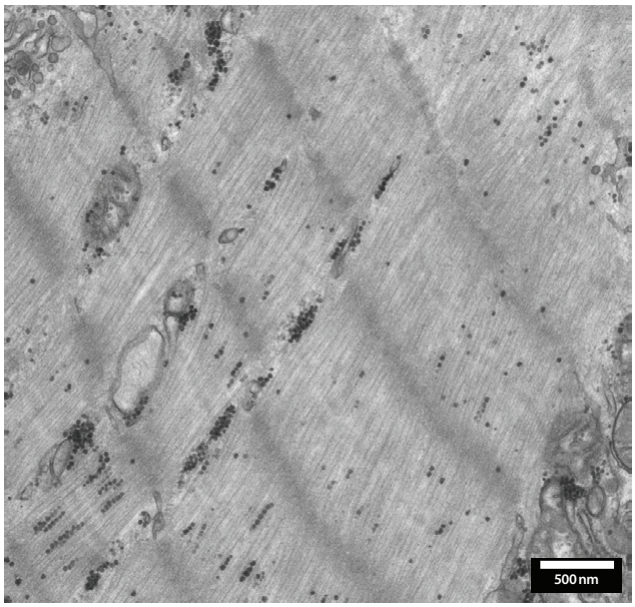
Point of interest: muscle structure including actin and myosinfilaments.



TEM: Heart Biopsy

Ultrathin section

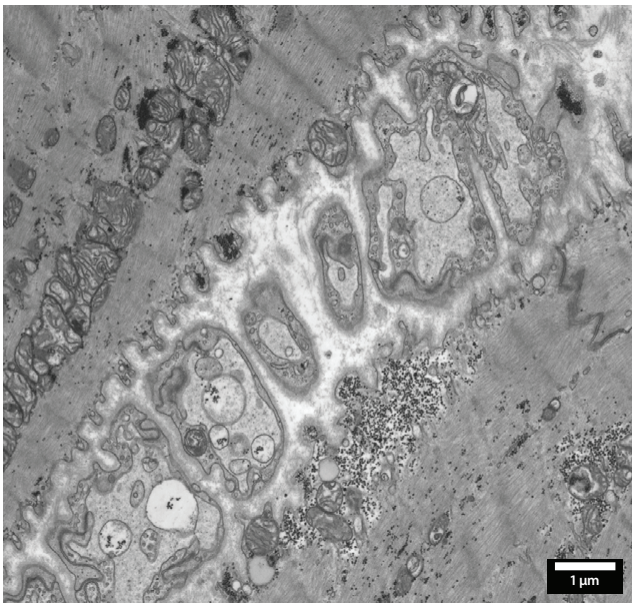
Point of interest: muscle structure including actin and myosinfilaments.



STEM: Heart Biopsy

Ultrathin section

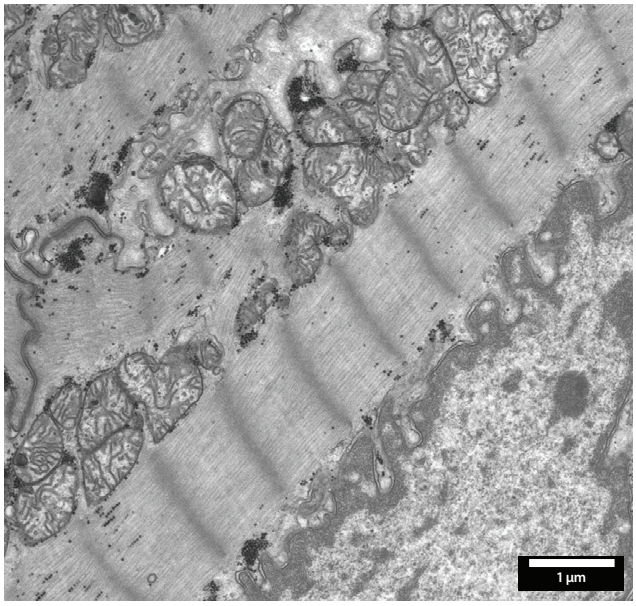
Point of interest: muscle structure including actin and myosinfilaments.



STEM: Heart Biopsy

Ultrathin section

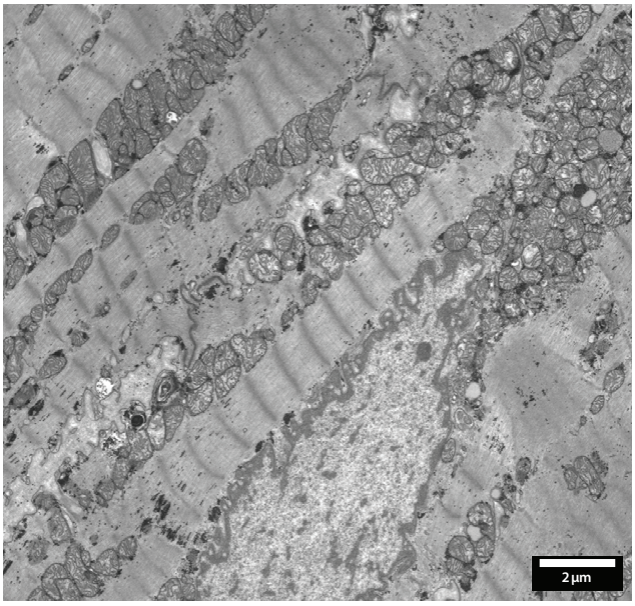
Point of interest: muscle structure including actin and myosinfilaments.



STEM: Heart Biopsy

Ultrathin section

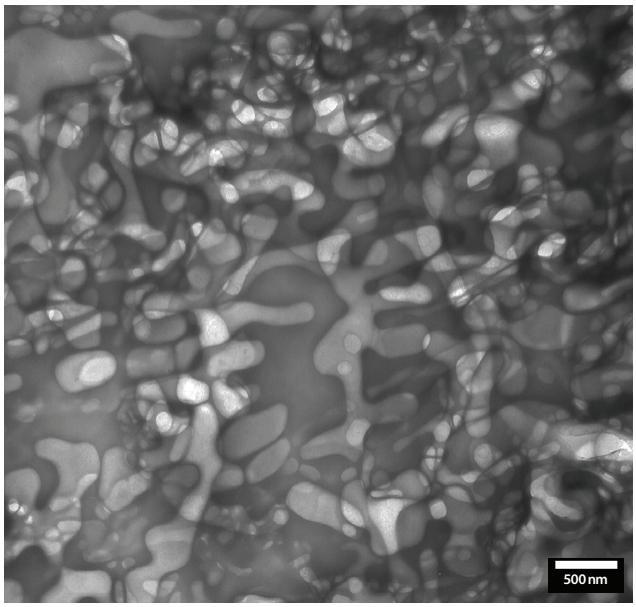
Point of interest: muscle structure including actin and myosinfilaments.



STEM: Heart Biopsy

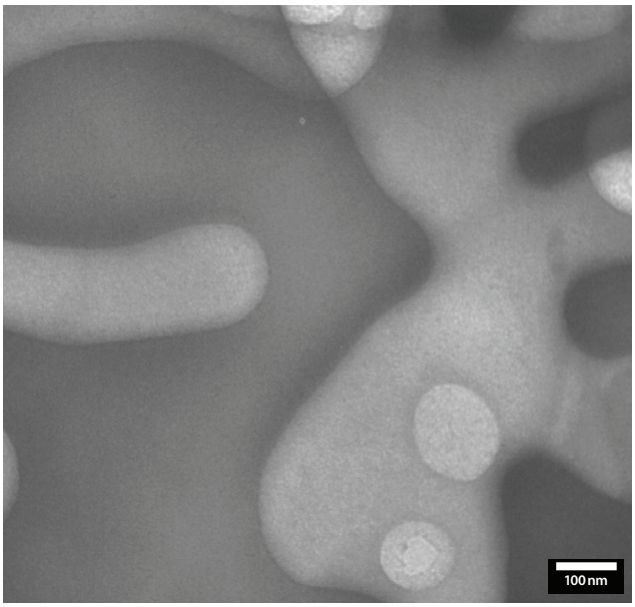
Ultrathin section

Point of interest: muscle structure including actin and myosinfilaments.



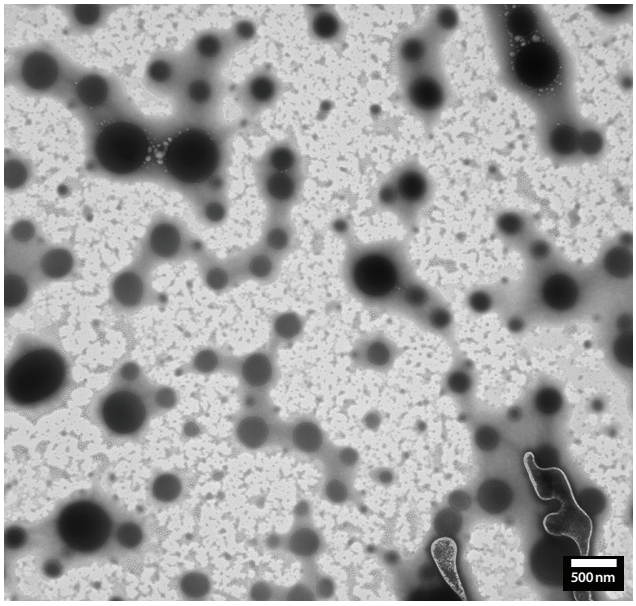
TEM: Liposomes on Carbon

Particles on carbon film



TEM: Liposomes on Carbon

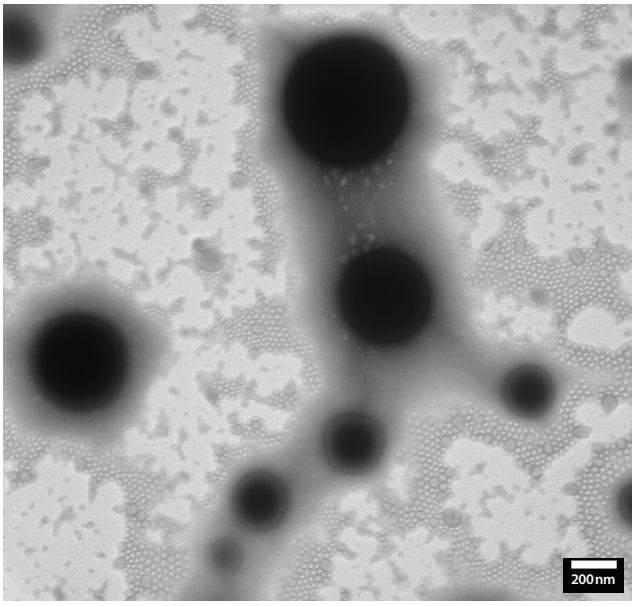
Particles on carbon film



TEM: Bupivacaine Liposomes

Particles on carbon film

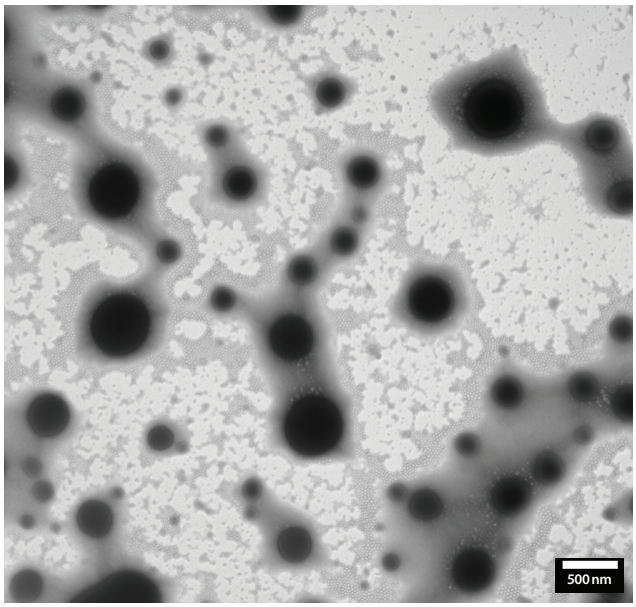
Bupivacaine in aqueous solution



TEM: Bupivacaine Liposomes

Particles on carbon film

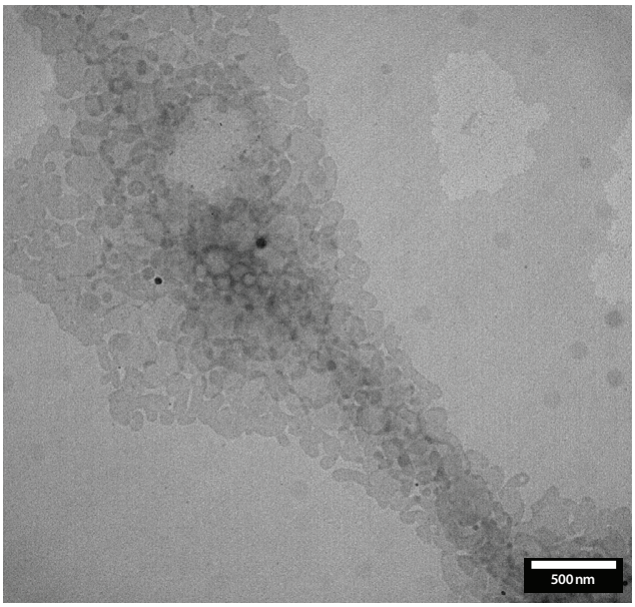
Bupivacaine in aqueous solution



TEM: Bupivacaine Liposomes

Particles on carbon film

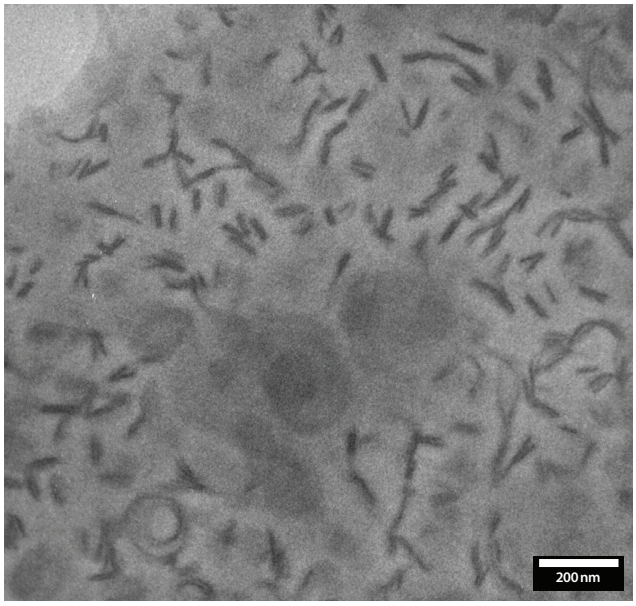
Bupivacaine in aqueous solution



TEM: Peg and Liposome Formulation

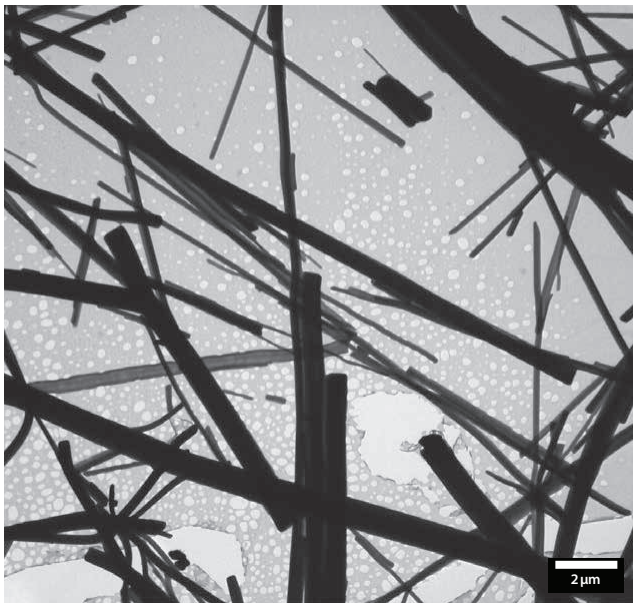
Particles on carbon film

Liposomes dispersed in 5% dextrose in water



TEM: Liposomes

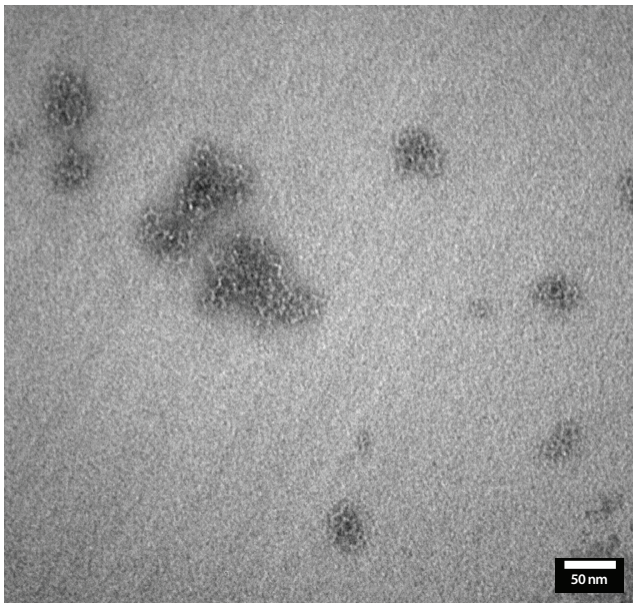
Particles on carbon film



TEM: Taxol

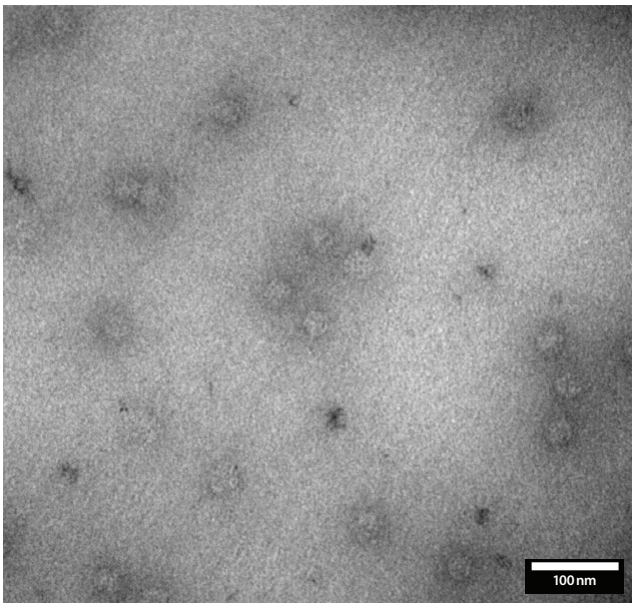
Particles on carbon film

Organic fibers of plant alcaloid – cytotoxic chemotherapy drug



TEM: I301 Nanocage

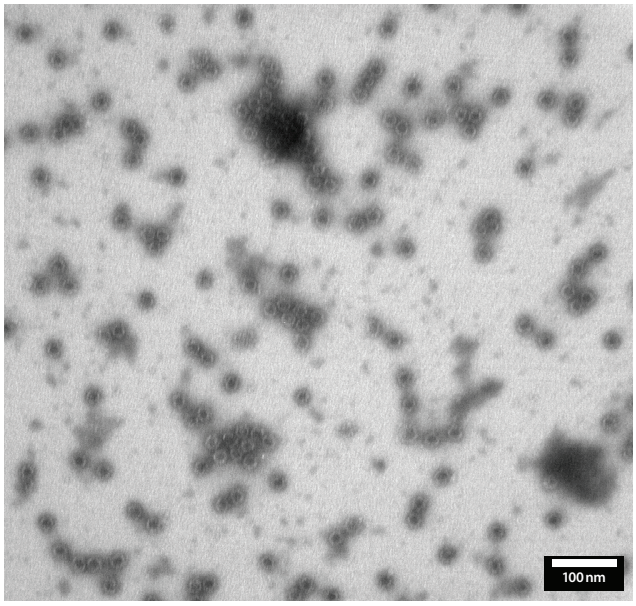
Stained particles on carbon film



TEM: I301 Nanocage with GFP

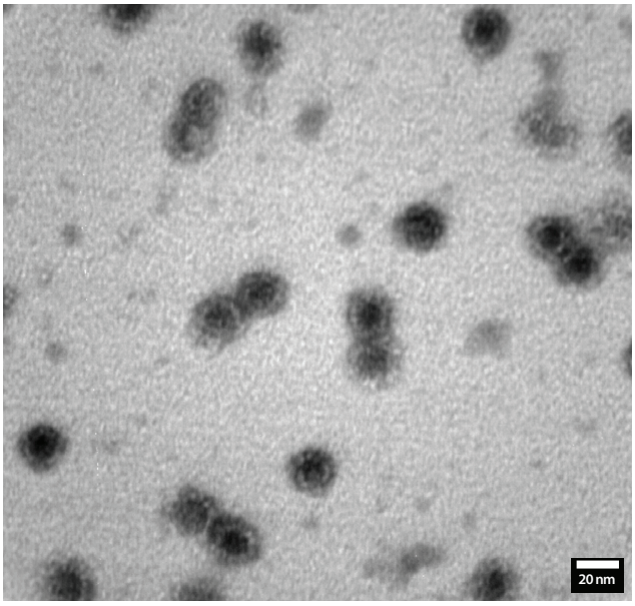
Stained particles on carbon film

Nanoparticles with green fluorescent protein



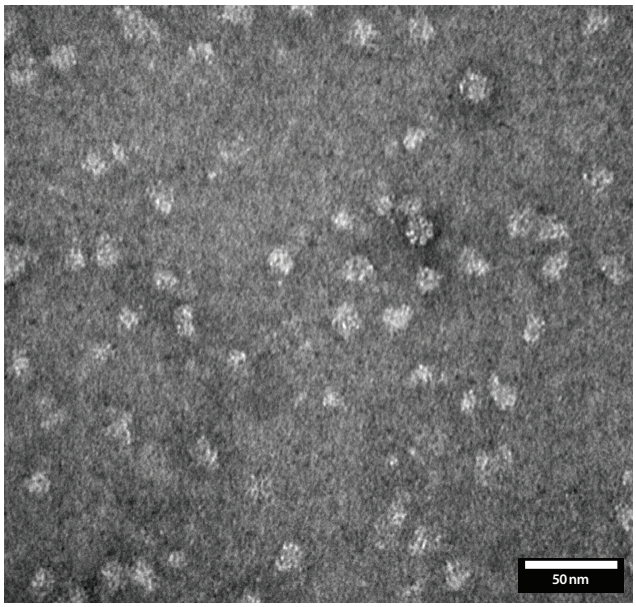
TEM: Nanocages

Particles on carbon film



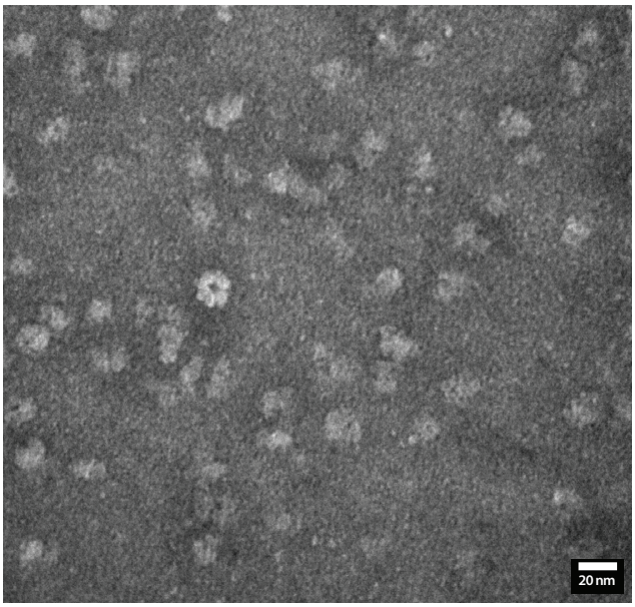
TEM: Nanocages

Particles on carbon film



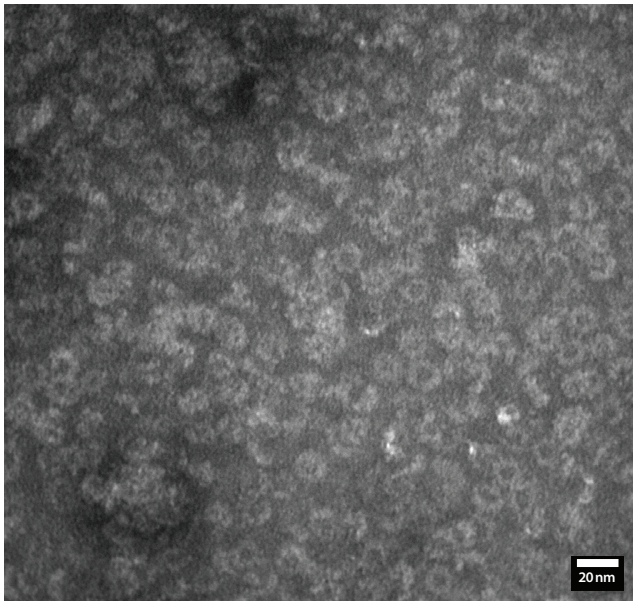
TEM: Stained Proteins

Stained particles on carbon film



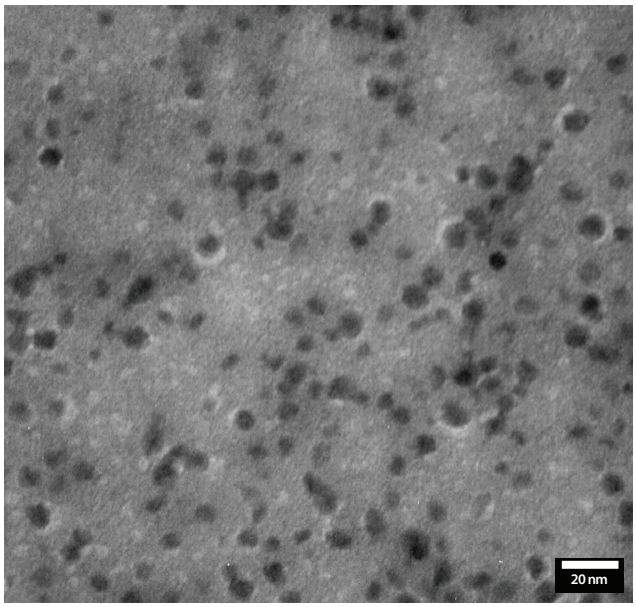
TEM: Stained Proteins

Stained particles on carbon film



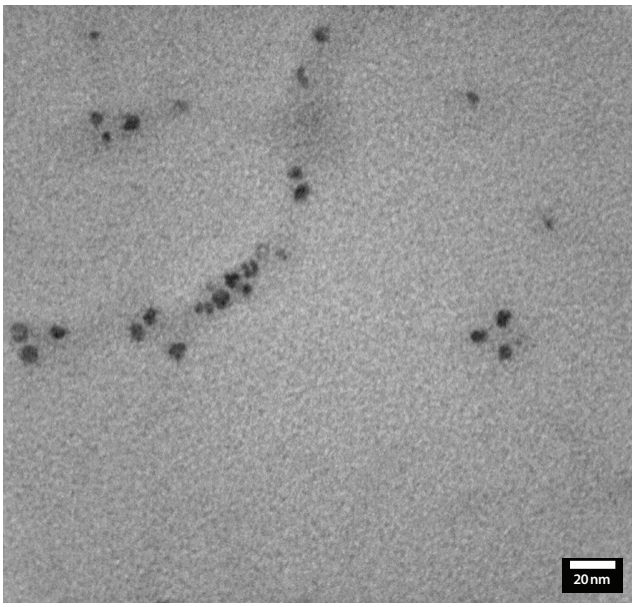
TEM: Nano Rings

Stained particles on carbon film



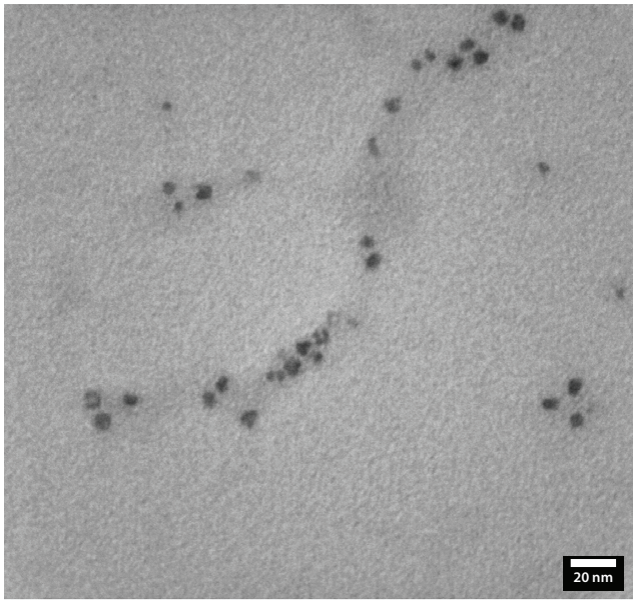
TEM: 12nm Ferritin

Particles on carbon film



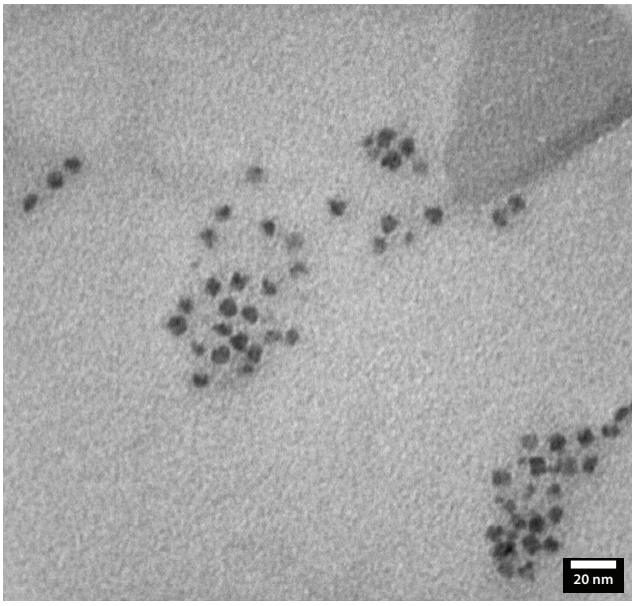
TEM: 12nm Ferritin

Particles on carbon film



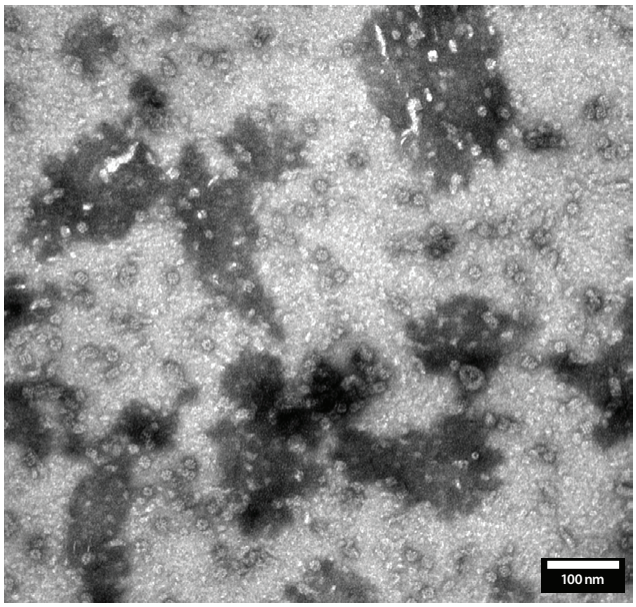
TEM: 12nm Ferritin

Particles on carbon film



TEM: 12nm Ferritin

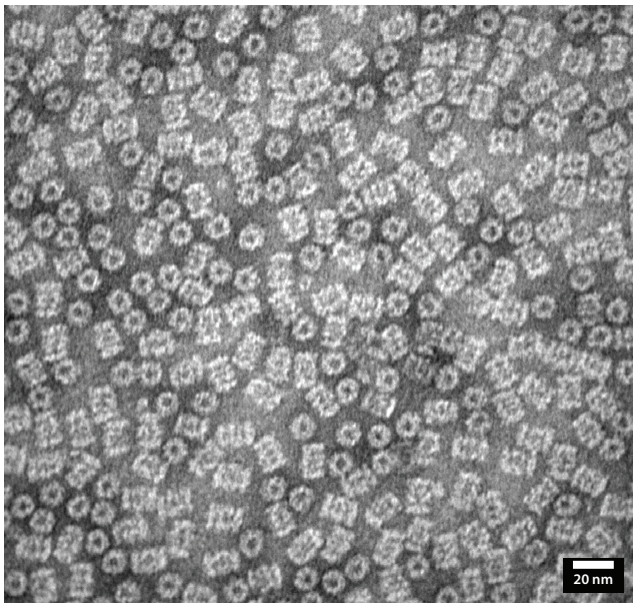
Particles on carbon film



TEM: GroEL Protein

Particles on carbon film

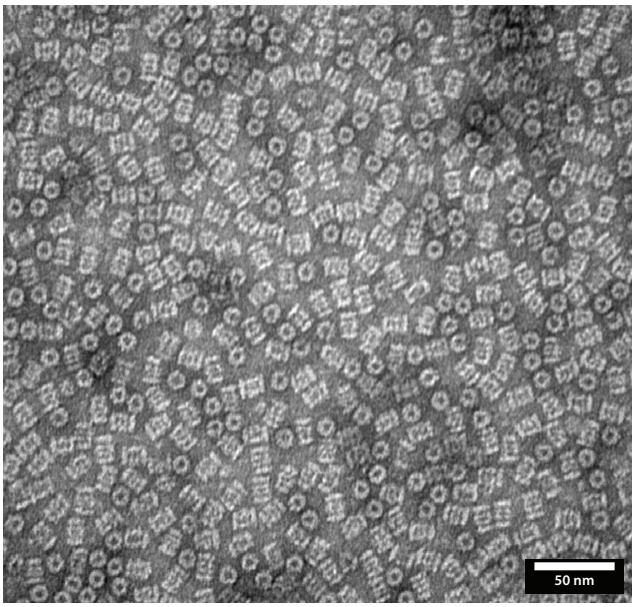
Sample courtesy of Radka Holbová, M.Sc., CEITEC MU



TEM: 20S Proteasomes

Stained particles on carbon film

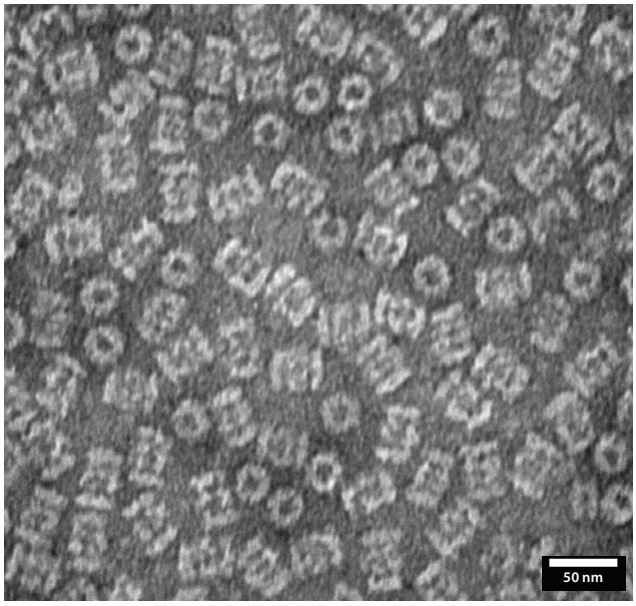
Negative stained proteasomes purified from a Thermus thermophilus archeal lysate



TEM: 20S Proteasomes

Stained particles on carbon film

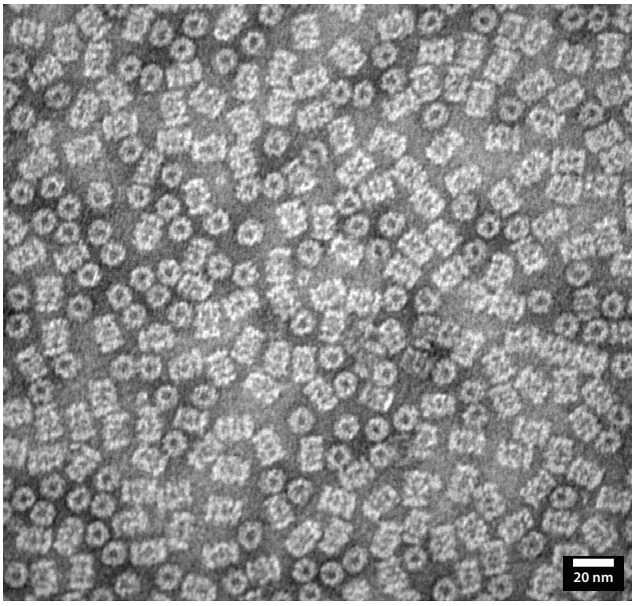
Negative stained proteasomes purified from a Thermus thermophilus archeal lysate



TEM: 20S Proteasomes

Stained particles on carbon film

Negative stained proteasomes purified from a Thermus thermophilus archeal lysate

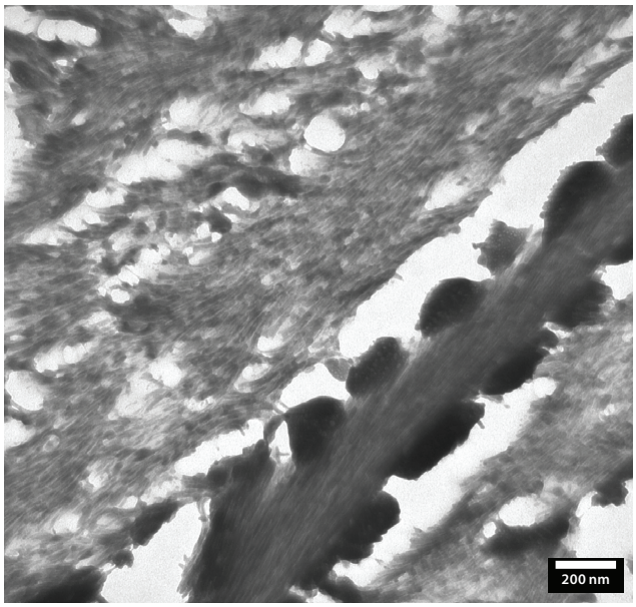


TEM: 20S Proteasomes

Stained particles on carbon film

Negative stained proteasomes purified from a Thermus thermophilus archeal lysate

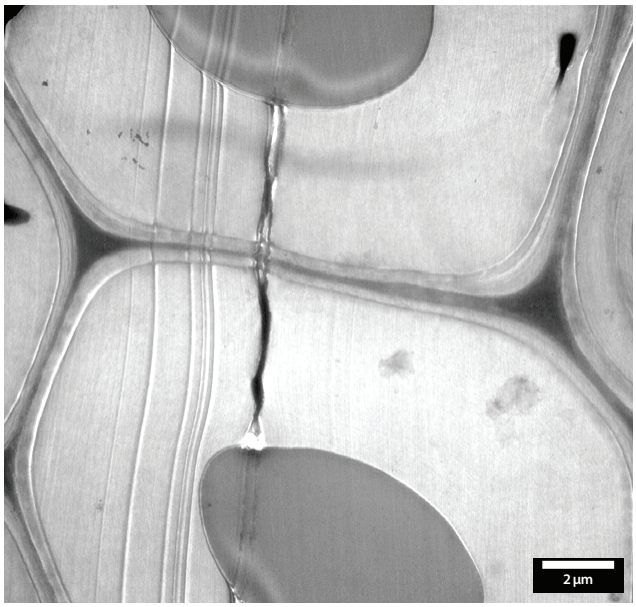
Sample courtesy of Prof. Holger Stark, MPI Göttingen



TEM: Insect Dactyl Impact

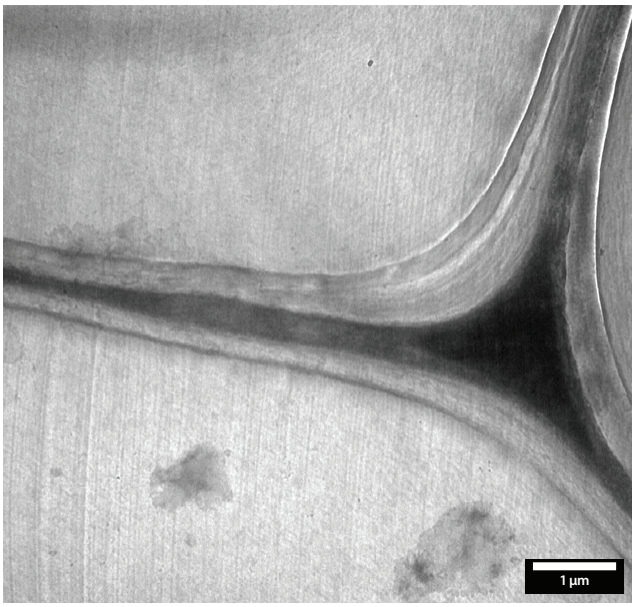
Stained section

Insect dactyl impact – beetle exoskeleton



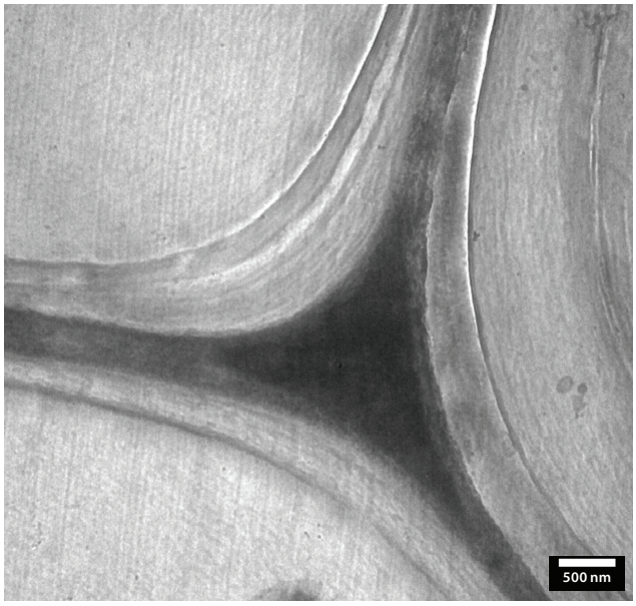
TEM: Cellular Structure of Wood

Stained section



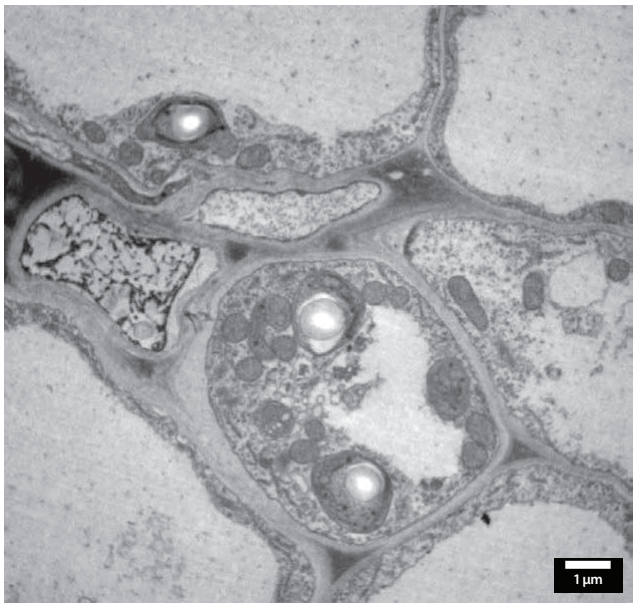
TEM: Cellular Structure of Wood

Stained section



TEM: Cellular Structure of Wood

Stained section



TEM: Tobacco Plant

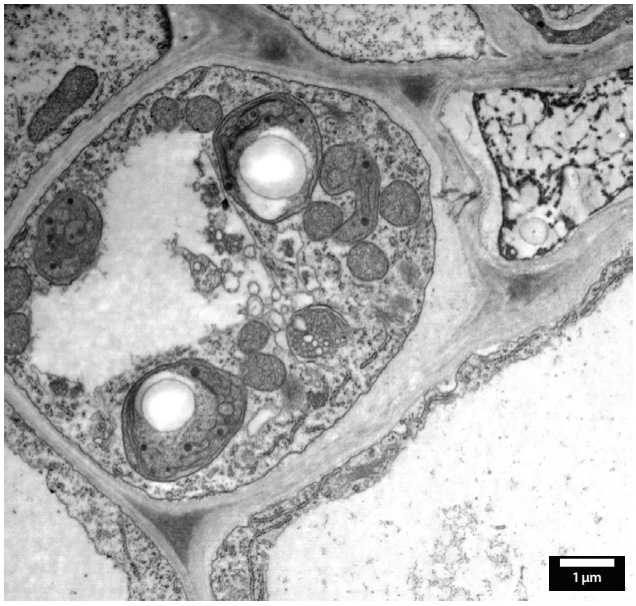
70 nm section

Fixated with OsO_4

STEM 15 kV: Tobacco Plant

70 nm section

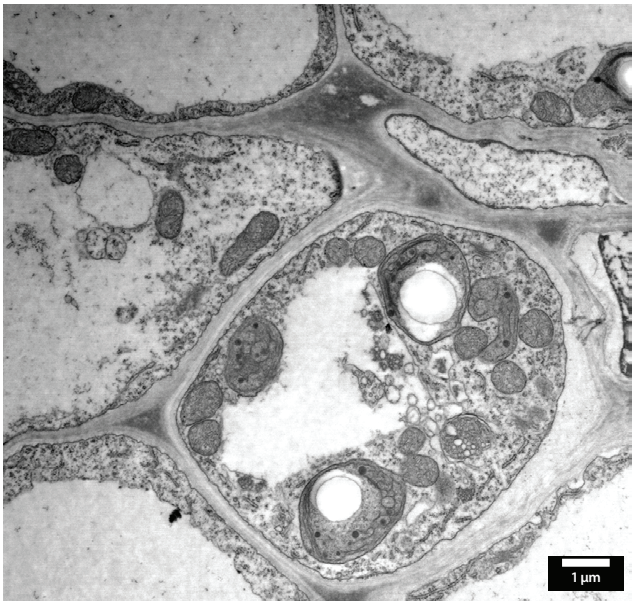
Fixated with OsO_4



STEM 15 kV: Tobacco Plant

70 nm section

Fixated with OsO_4

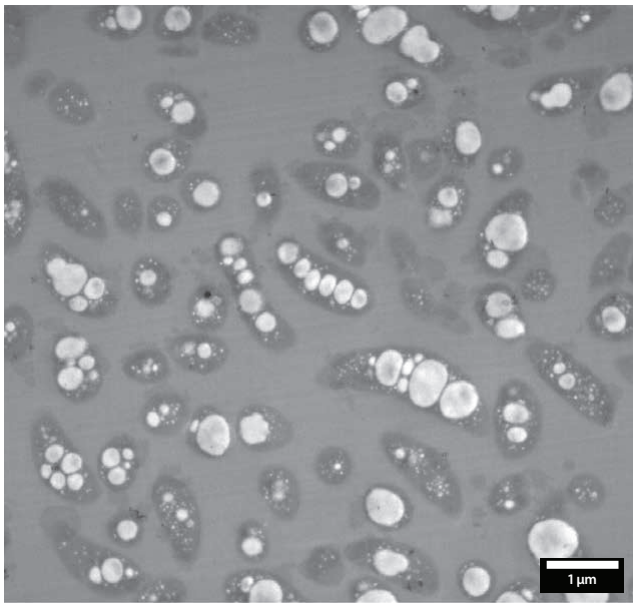


STEM 15 kV: Tobacco Plant

70 nm section

Fixated with OsO_4

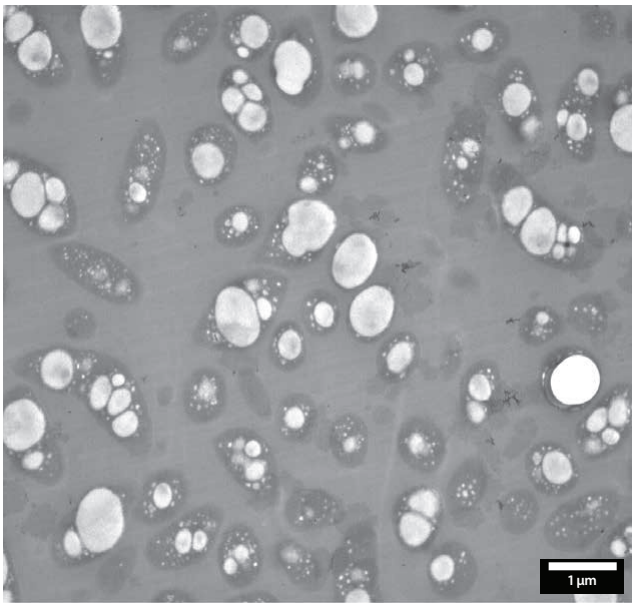
Sample courtesy of Ing. Jana Nebesářová, CSc., Charles University Faculty of Science



TEM: Bacterial Cells containing PHA Granule

Stained section

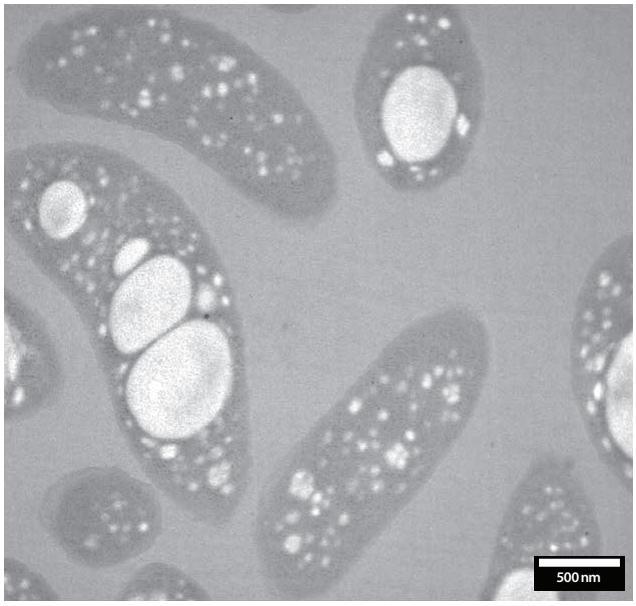
Epon embedded, 70 nm, block contrasted.
Point of interest: ultrastructure of bacterial cells.



TEM: Bacterial Cells containing PHA Granule

Stained section

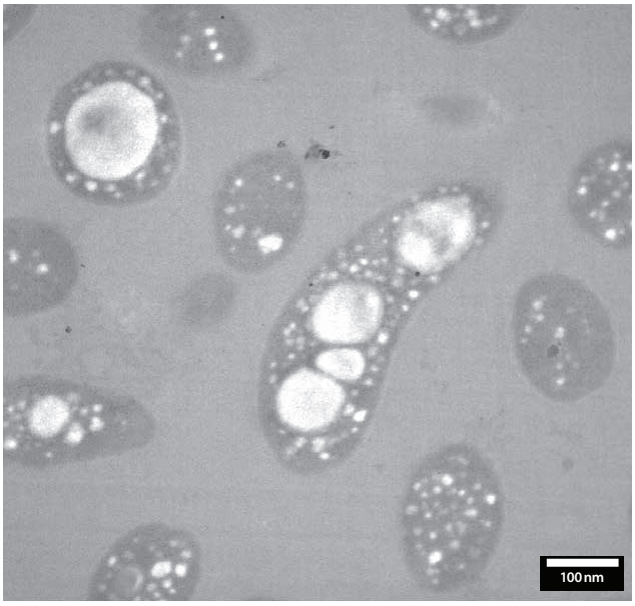
Epon embedded, 70 nm, block contrasted.
Point of interest: ultrastructure of bacterial cells.



TEM: Bacterial Cells containing PHA Granule

Stained section

Epon embedded, 70 nm, block contrasted.
Point of interest: ultrastructure of bacterial cells.

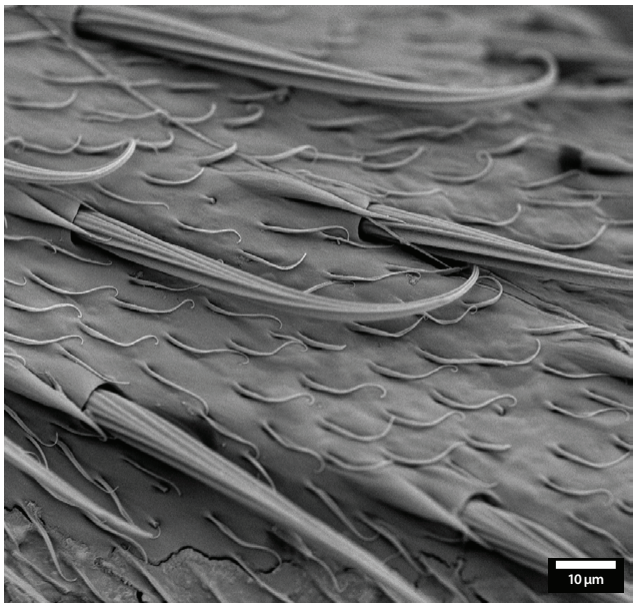


TEM: Bacterial Cells containing PHA Granule

Stained section

Epon embedded, 70 nm, block contrasted.
Point of interest: ultrastructure of bacterial cells.

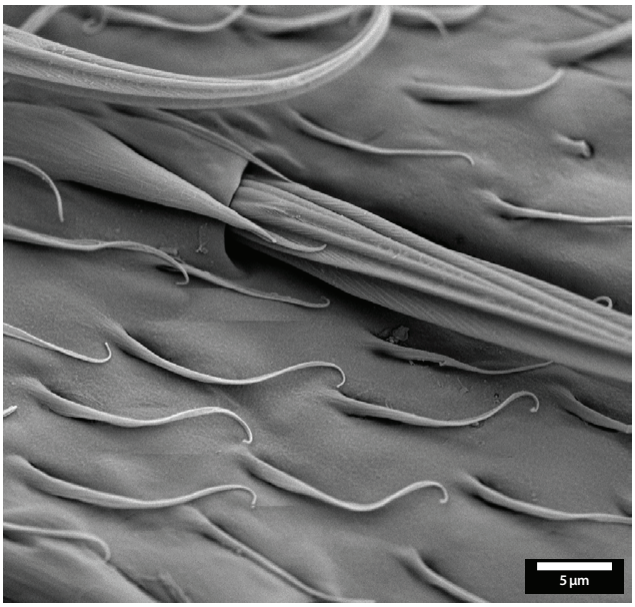
Sample courtesy of Eva Slaninová, PhD., FCH VUT



SEM: Insect

Sample on grid

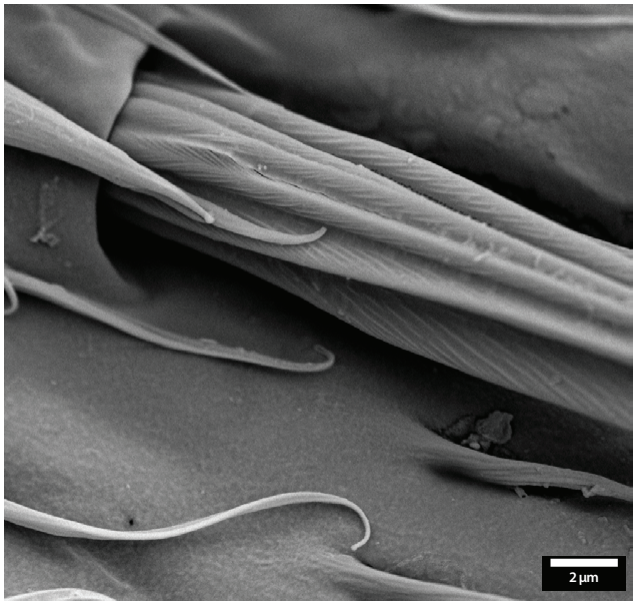
BSE. Gold coated



SEM: Insect

Sample on grid

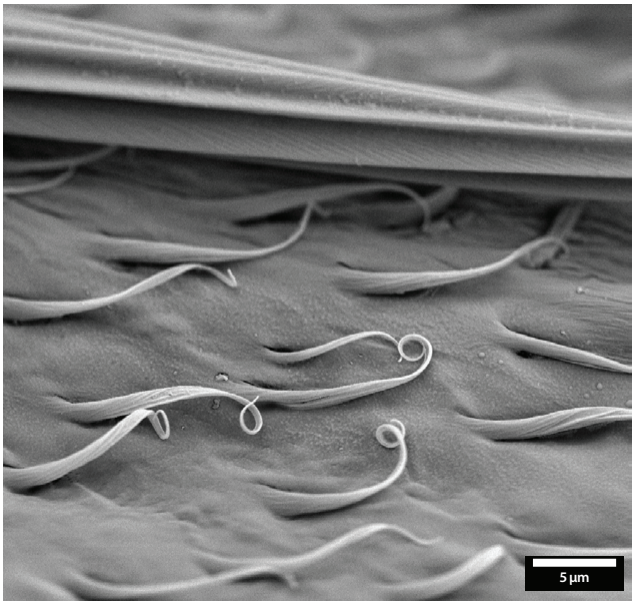
BSE. Gold coated



SEM: Insect

Sample on grid

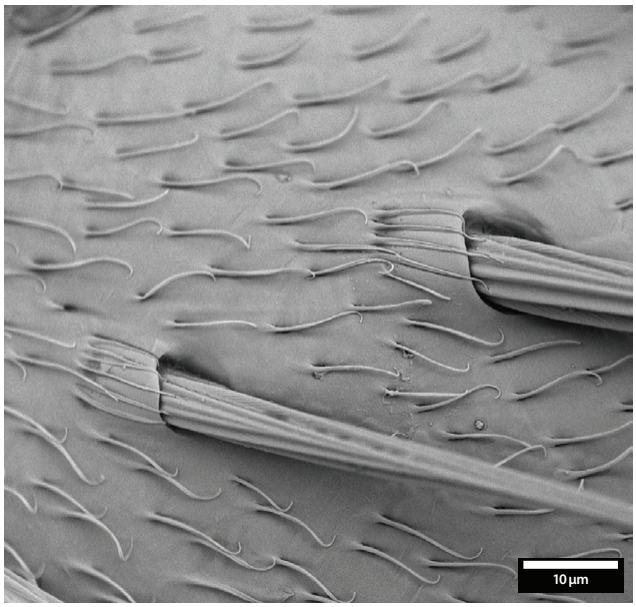
BSE. Gold coated



SEM: Insect

Sample on grid

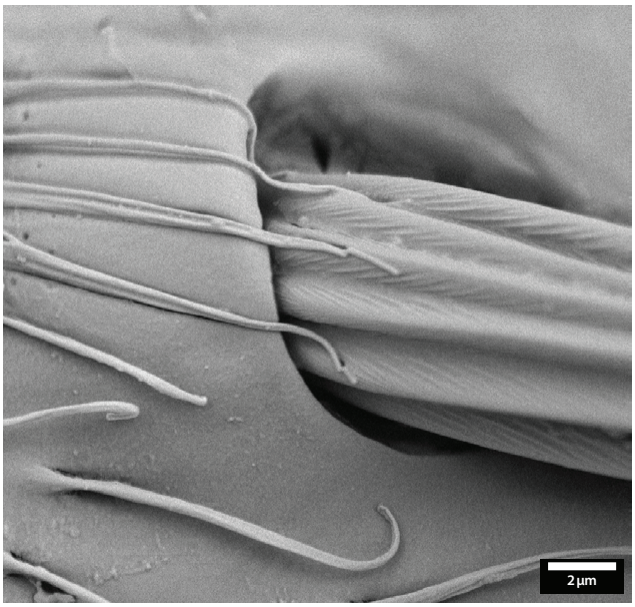
BSE. Gold coated



SEM: Insect

Sample on grid

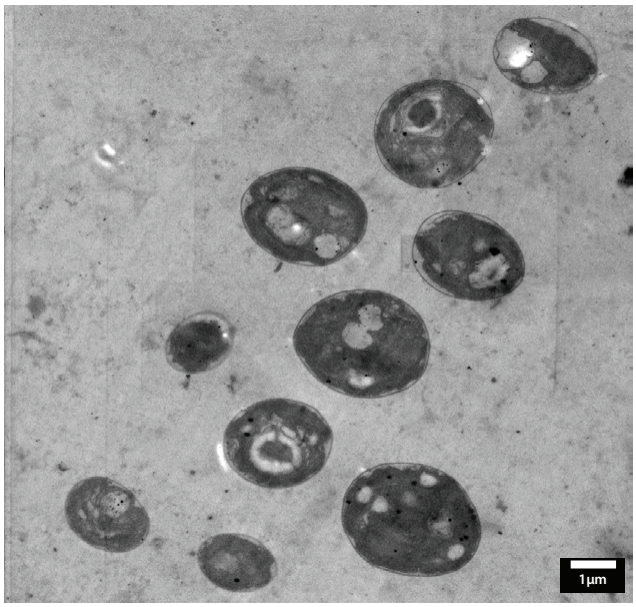
BSE. Gold coated



SEM: Insect

Sample on grid

BSE. Gold coated



STEM 15 kV: Chlorella Vulgaris

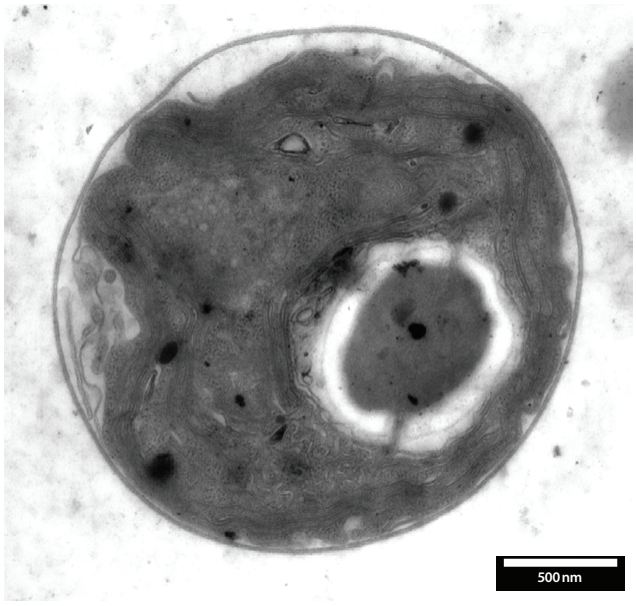
Stained section

Suppur embedded 70 nm section of algae, post-fixed by OsO_4

STEM 15 kV: Chlorella Vulgaris

Stained section

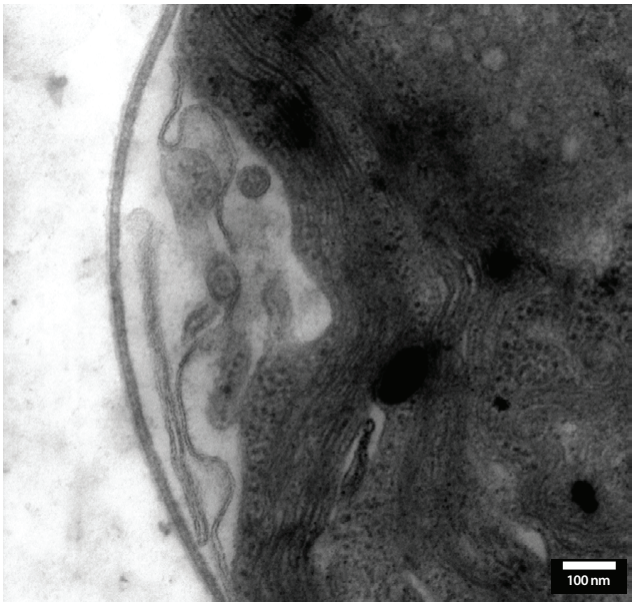
Suppur embedded 70 nm section of algae culture treated by Ag-citrate, post-fixed by OsO_4



STEM 15 kV: Chlorella Vulgaris

Stained section

Suppur embedded 70 nm section of algae, post-fixed by OsO_4

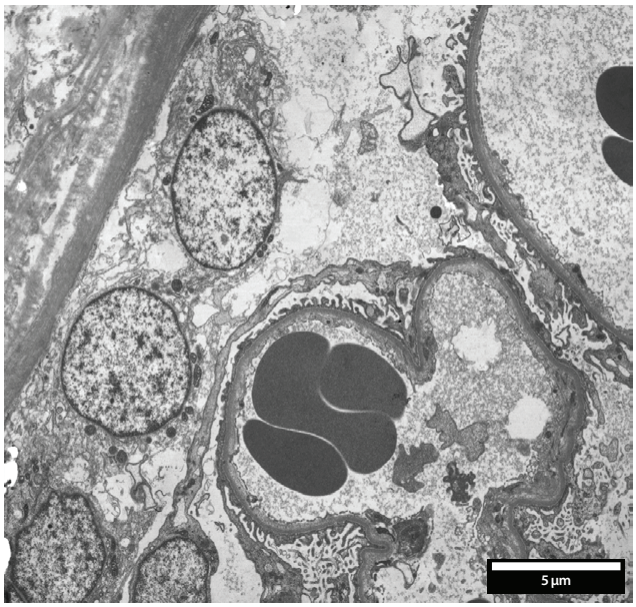


STEM 15 kV: Chlorella Vulgaris

Stained section

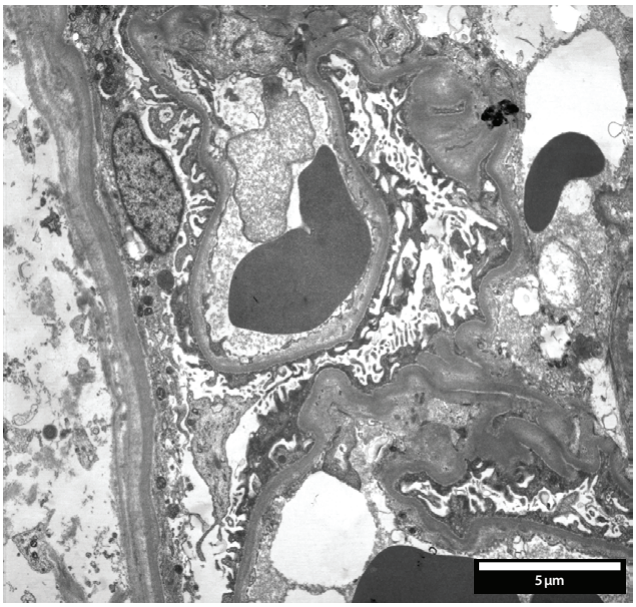
Suppur embedded 70 nm section of algae, post-fixed by OsO_4.

Sample courtesy of prof. Petra Peharec Štefanič, University of Zagreb



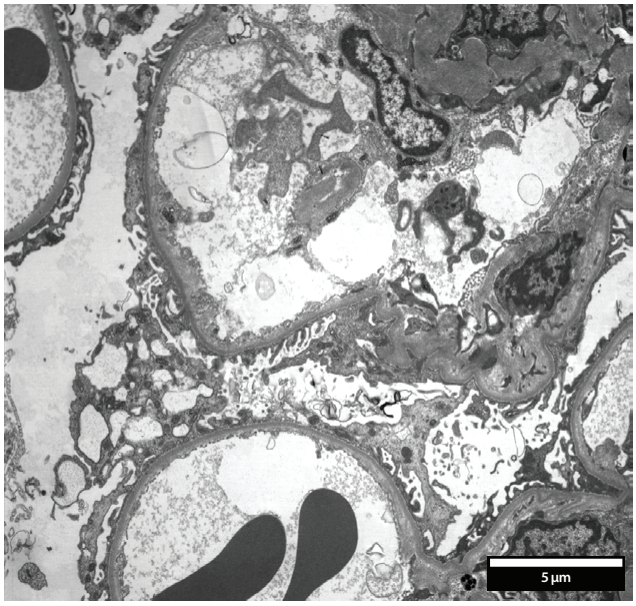
STEM 15 kV: Kidney

Stained section



STEM 15 kV: Kidney

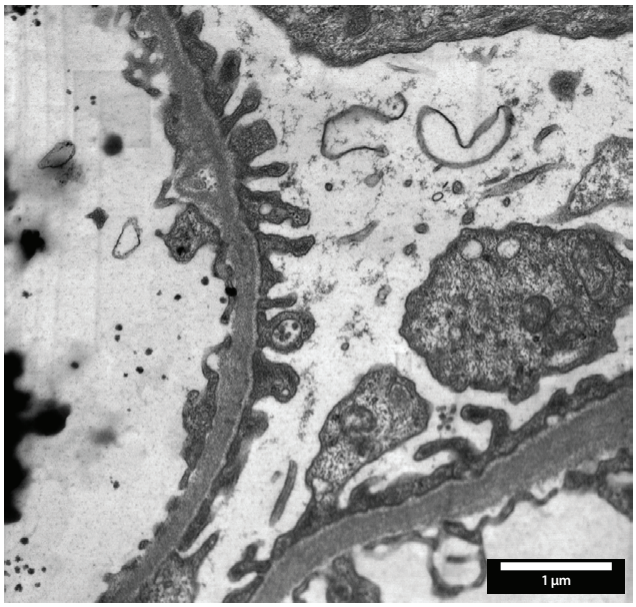
Stained section



STEM 15 kV: Kidney

Stained section

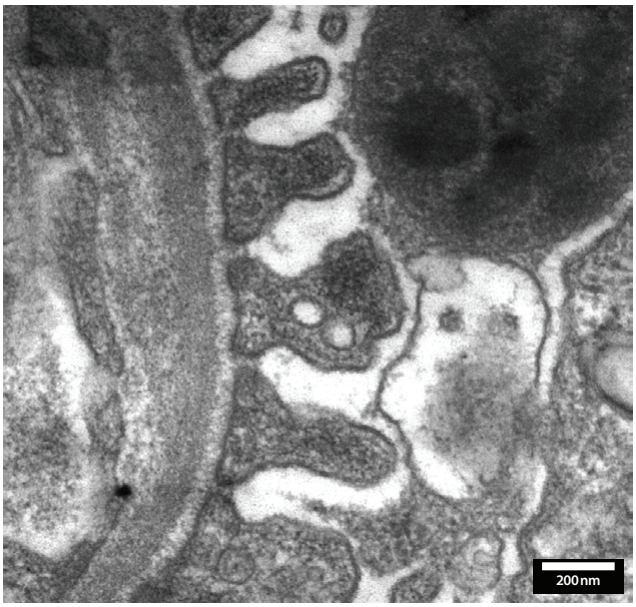
Sample courtesy of Beata Szynaka, Ph.D., Medical University of Białystok



STEM 15 kV: Kidney

Stained section

Point of interest: podocytes with details of pedicles

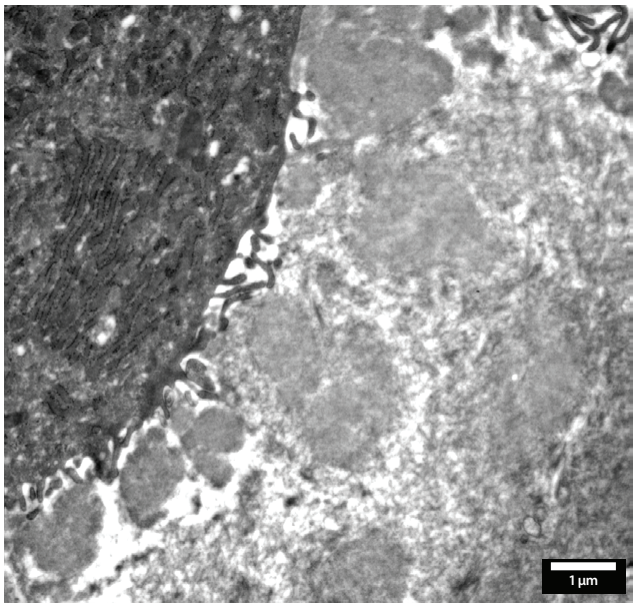


STEM 15 kV: Kidney

Stained section

Point of interest: podocytes with details of pedicles

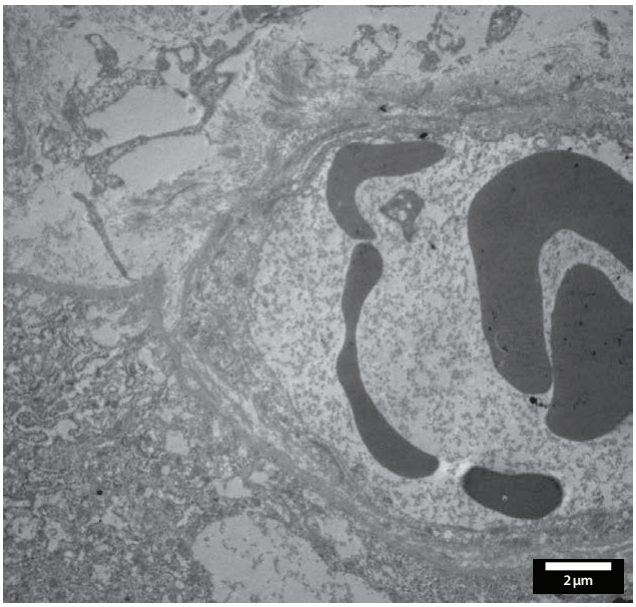
Sample courtesy of Beata Szynaka, Ph.D., Medical University of Białystok



STEM 15 kV: Placenta

70 nm Stained section

Fixated in glutaraldehyde 2.5% OsO_4



TEM: Placenta

70 nm Stained section

Fixated in glutaraldehyde 2.5% OsO_4

Sample courtesy of Beata Szynaka, Ph.D., Medical University of Białystok

STEM 15 kV: Chlorella Vulgaris

Stained section

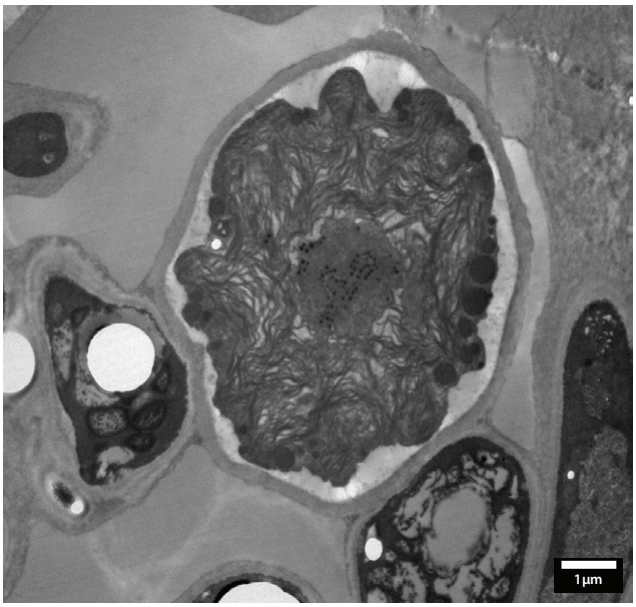
Suppur embedded 70 nm section of algae,
post-fixed by OsO_4

Sample courtesy of Bruno Komazec, Faculty of Science, University of Zagreb

TEM: Plant Tissue

Section on carbon film

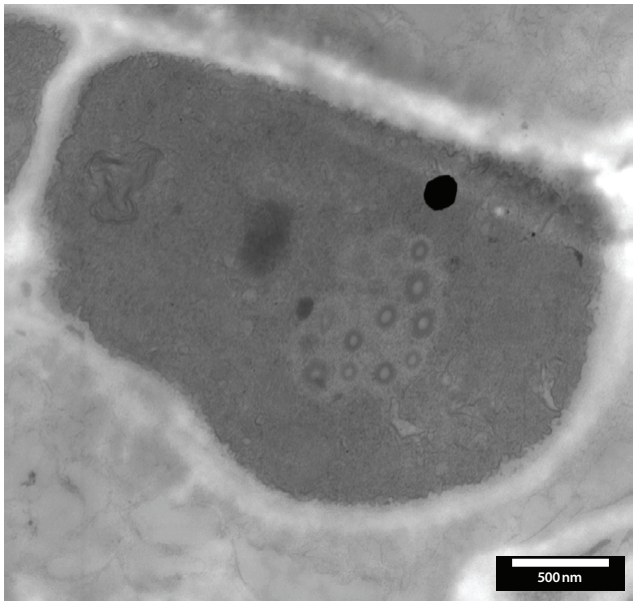
Unstained section 60 nm



TEM: Plant Tissue

Section on carbon film

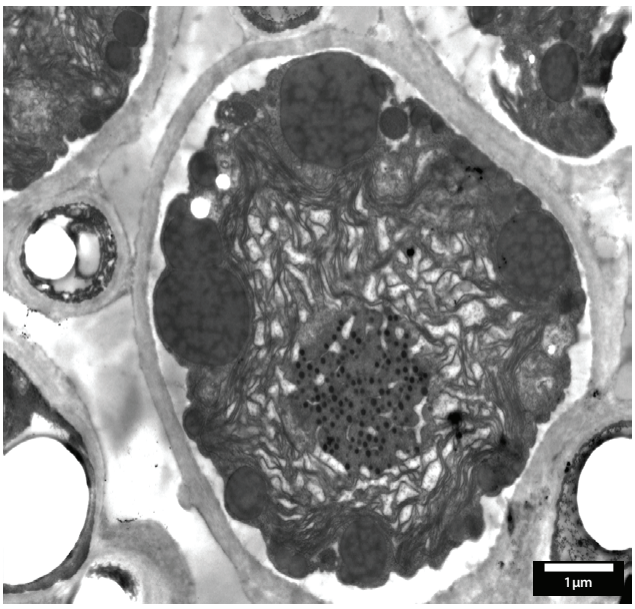
Unstained section 60 nm



STEM 15 kV: Plant Tissue

Section on carbon film

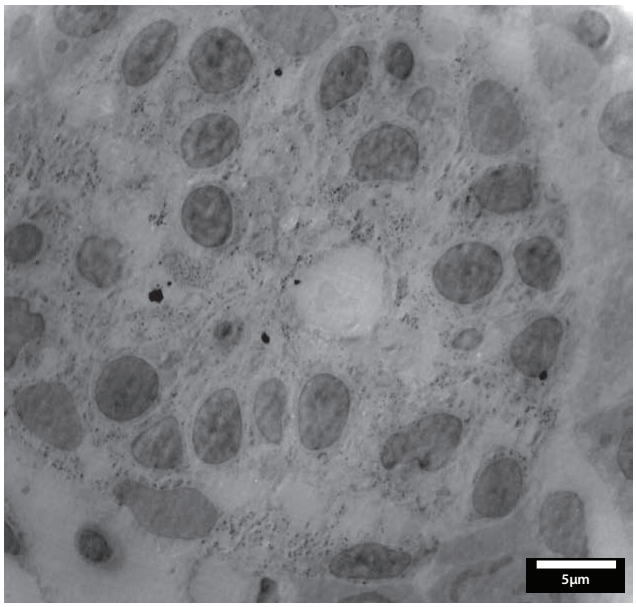
Unstained section 60 nm



STEM 10 kV: Plant Tissue

Section on carbon film

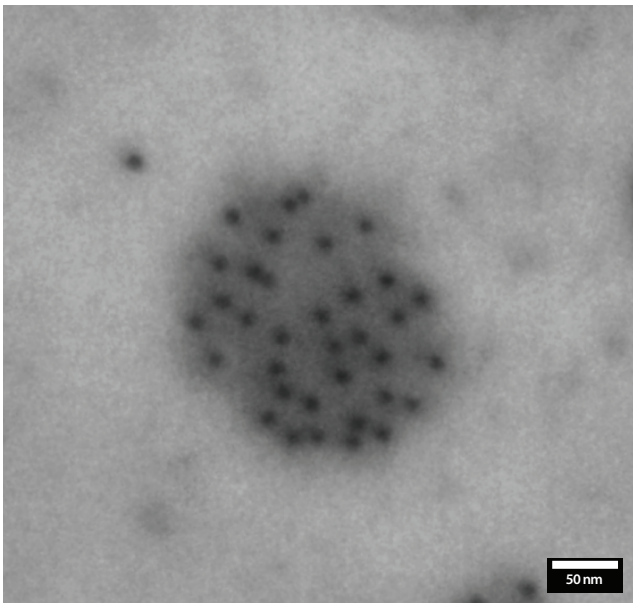
Unstained section 60 nm



TEM: Cells with Au

Stained section

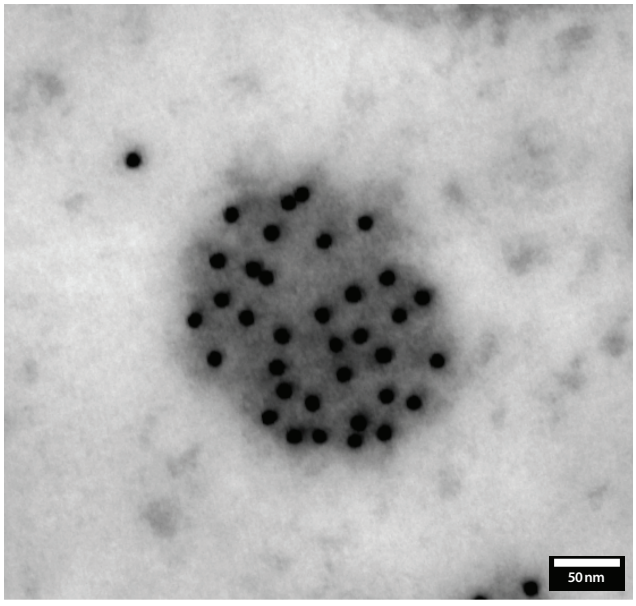
Immunogold labeling of insulin in beta-cell granules of a zebrafish larva



TEM: Cells with Au

Stained section

Immunogold labeling of insulin in beta-cell granules of a zebrafish larva

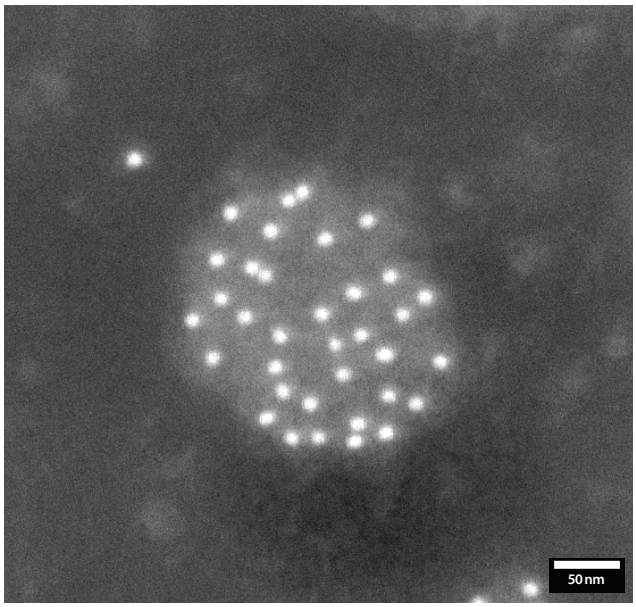


STEM: Cells with Au

Stained section

Immunogold labeling of insulin in beta-cell granules of a zebrafish larva

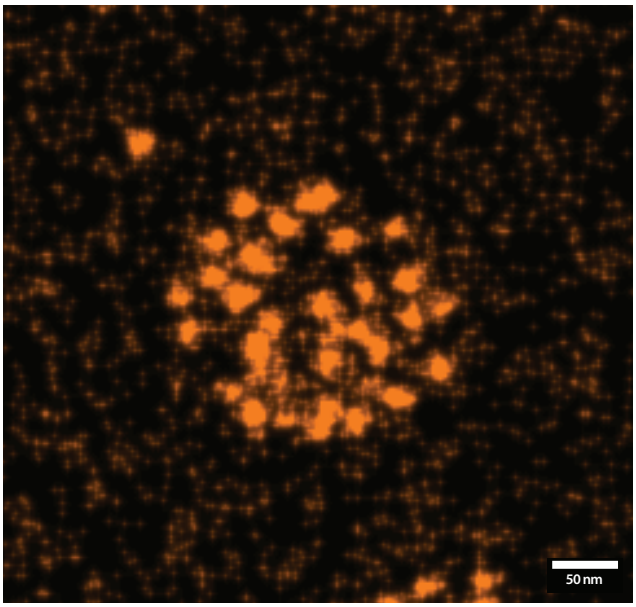
Sample courtesy of Dr. Thomas Kurth, TUD



SEM: Cells with Au

Stained section

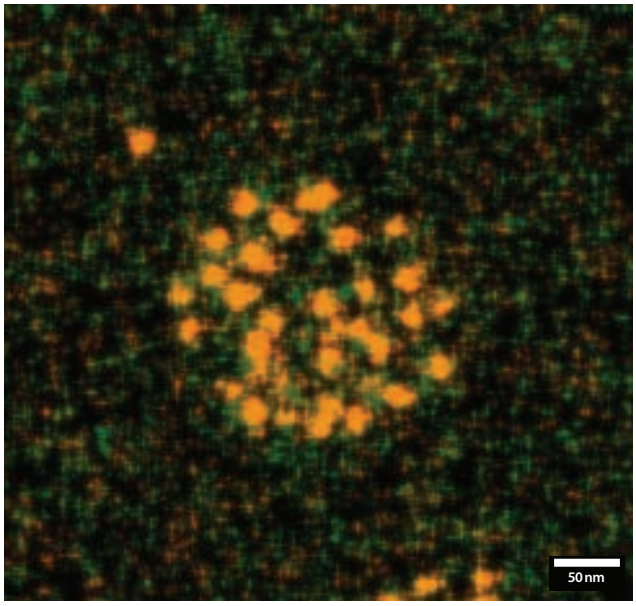
BSE. Immunogold labeling of insulin in beta-cell granules of a zebrafish larva



EDS: Cells with Au

Stained section

Immunogold labeling of insulin in beta-cell granules of a zebrafish larva; Au mapping

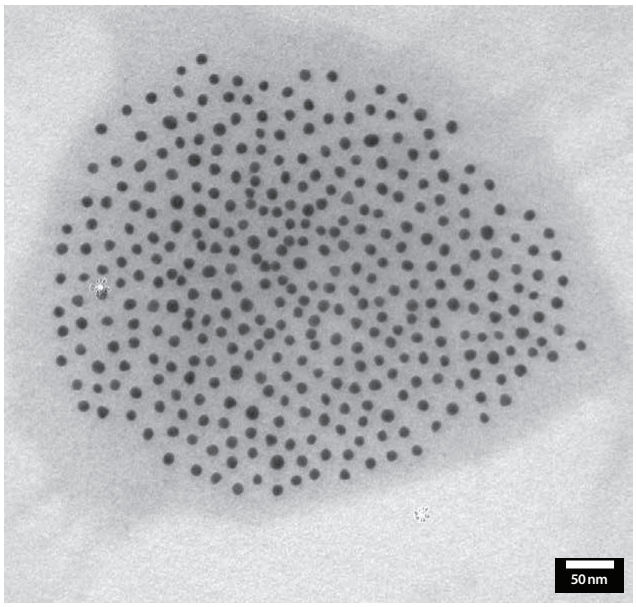


EDS: Cells with Au

Stained section

Immunogold labeling of insulin in beta-cell granules of a zebrafish larva

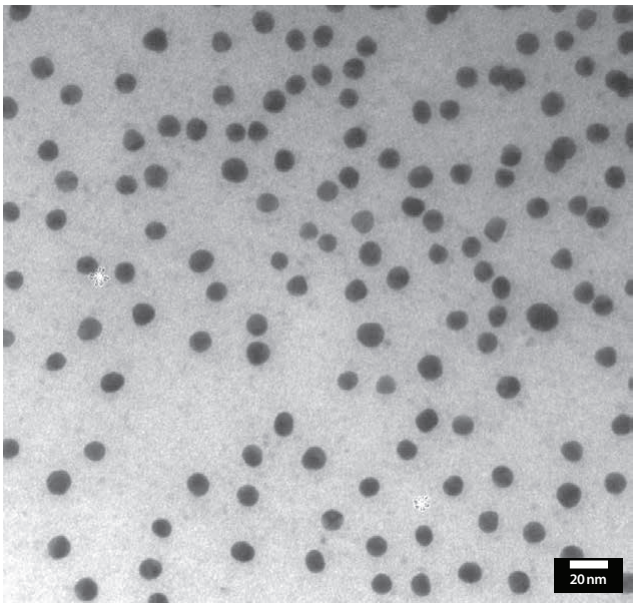
Sample courtesy of Dr. Thomas Kurth, TUD



TEM: Au Nanoparticles

Particles on carbon film

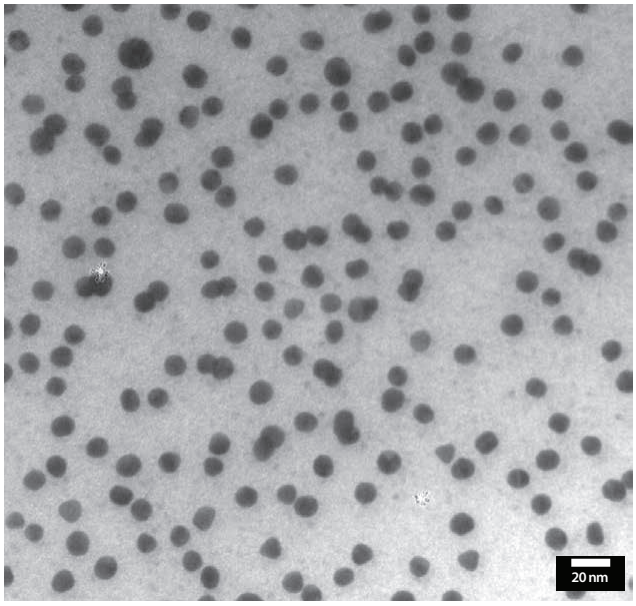
10 nm size



TEM: Au Nanoparticles

Particles on carbon film

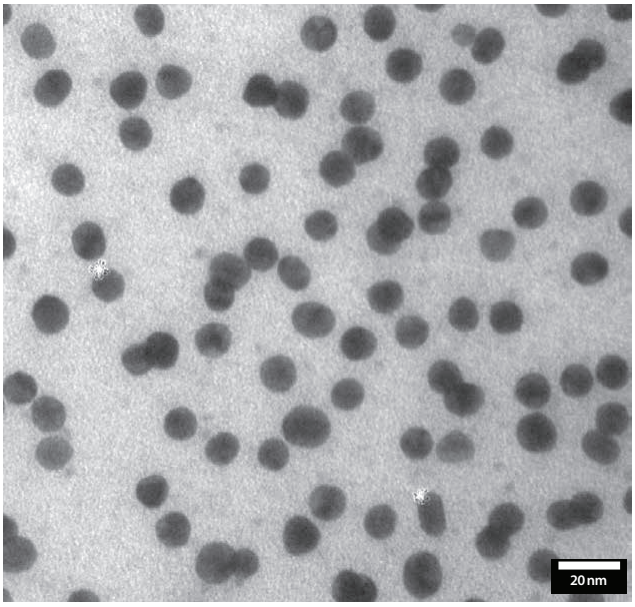
10 nm size



TEM: Au Nanoparticles

Particles on carbon film

10 nm size

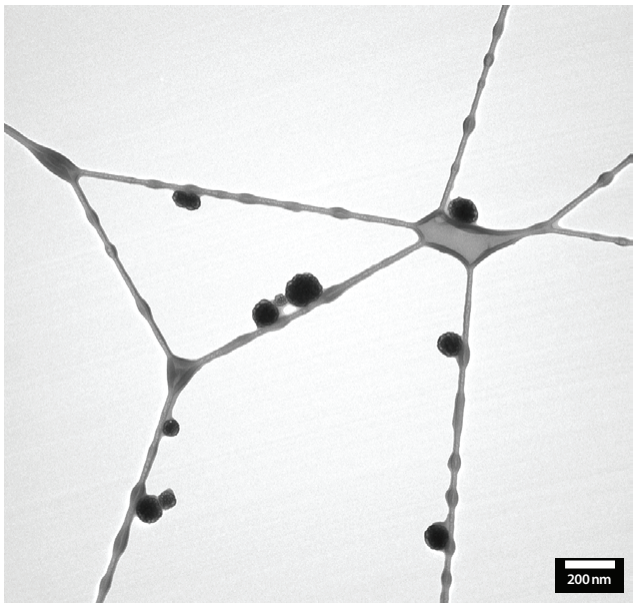


TEM: Au Nanoparticles

Particles on carbon film

10 nm size

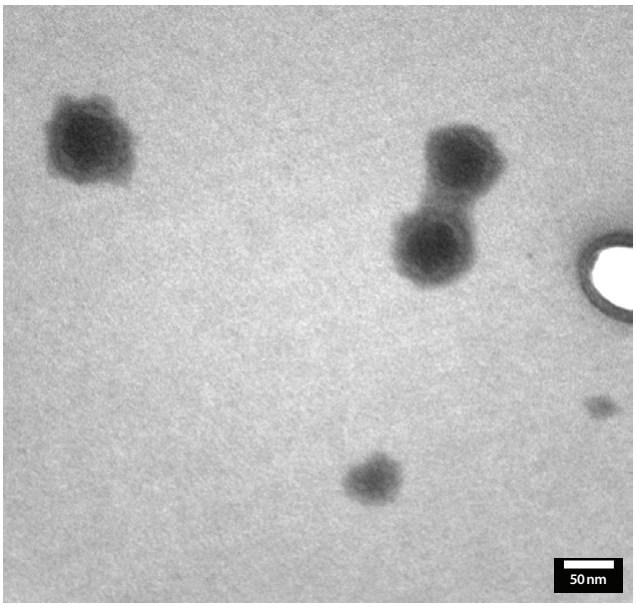
Sample courtesy of Mgr. Marcela Vlčnovská, Mendelu, Brno



TEM: Exosome

Particles on carbon film

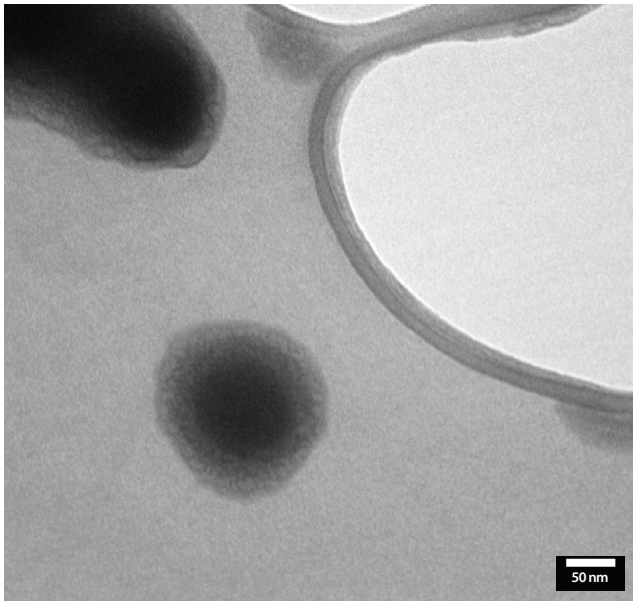
10 nm size



TEM: Exosome

Particles on carbon film

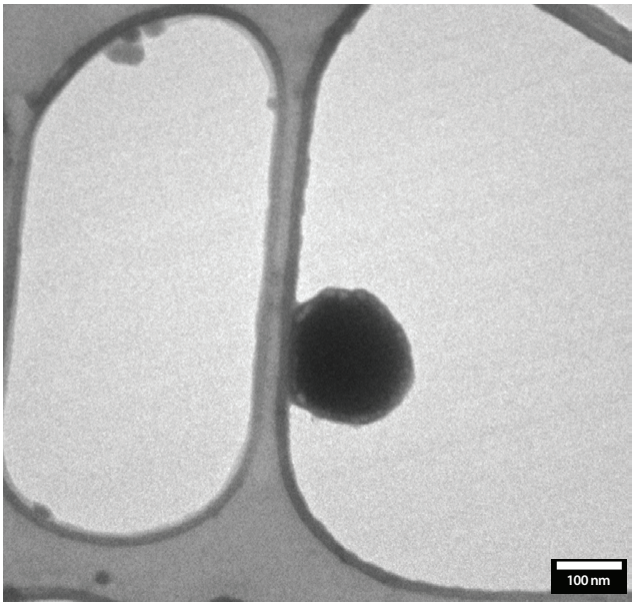
10 nm size



TEM: Exosome

Particles on carbon film

10 nm size

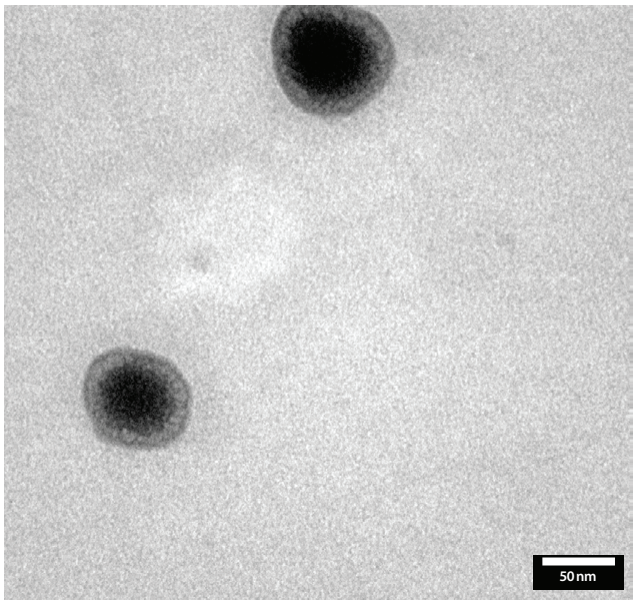


TEM: Exosome – Ce NPs

Particles on carbon film

Exosome vesicles in the size of 100 nm, potentially encapsulate cerium oxide nanoparticles (~5–10 nm) inside its membranes

Sample courtesy of Xiaohui Ju, Ph.D., CETIEC VUT

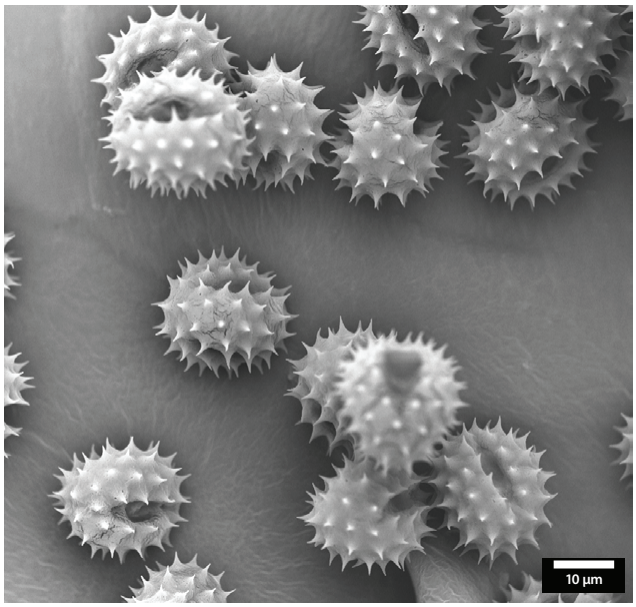


TEM: Exosome-TPP2-Ce NPs

Particles on carbon film

Exosome vesicles in the size of 100 nm, potentially encapsulate triphenol-phosphate cerium oxide nanoparticles (~5–10 nm) inside its membranes

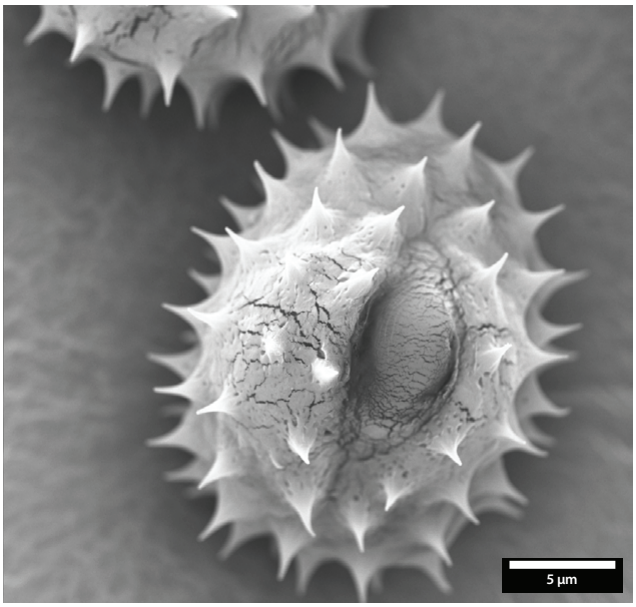
Sample courtesy of Xiaohui Ju, Ph.D., CETIEC VUT



SEM: Pollen Grains (Daisy)

Particles on stub

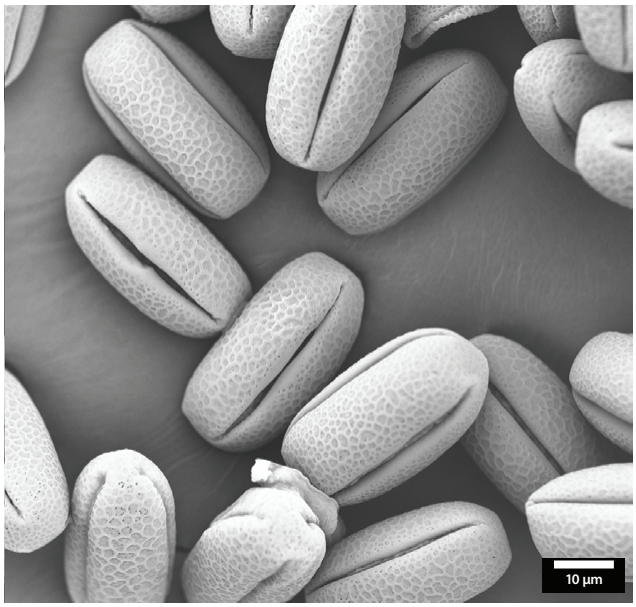
BSE. Gold coated



SEM: Pollen Grains (Daisy)

Particles on stub

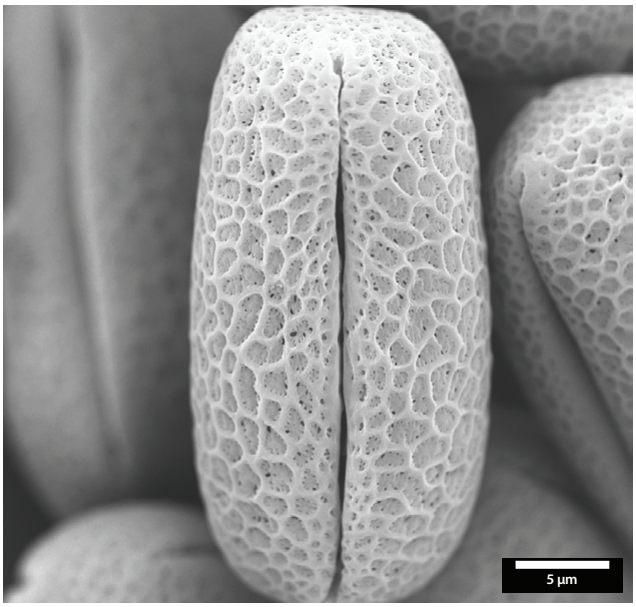
BSE. Gold coated



SEM: Pollen grains (Lupine Multiflora)

Particles on stub

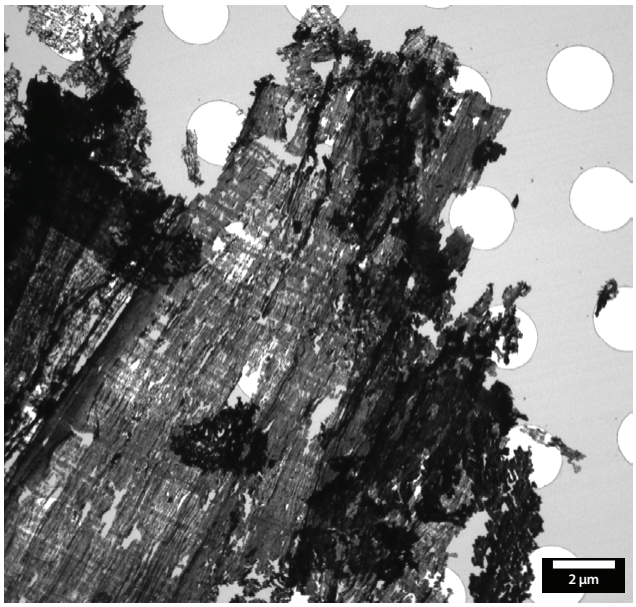
BSE. Gold coated



SEM: Pollen grains (Lupine Multiflora)

Particles on stub

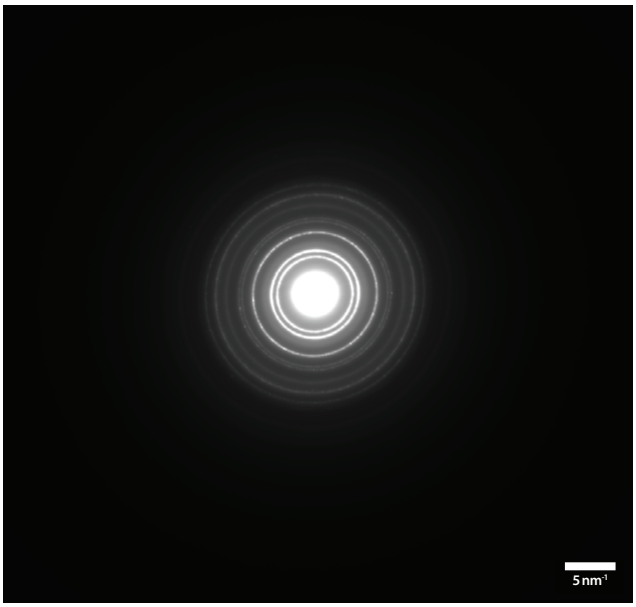
BSE. Gold coated



TEM: Shells

Unstained section

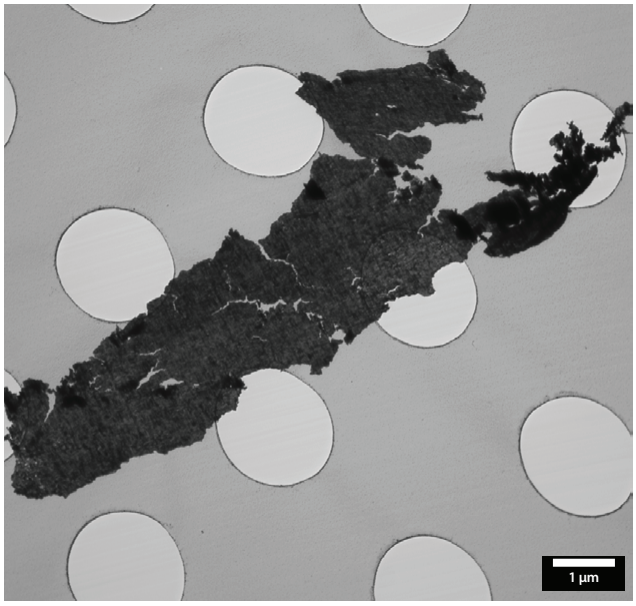
Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure



ED: Shells

Unstained section

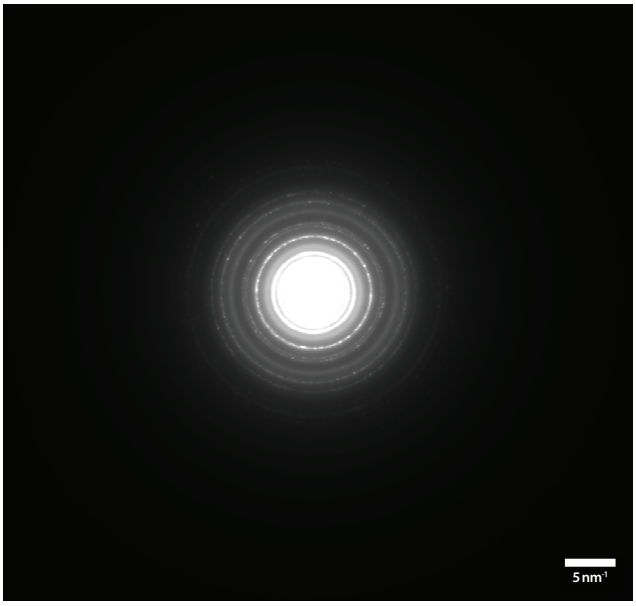
Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure



TEM: Coral

Unstained section

Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure

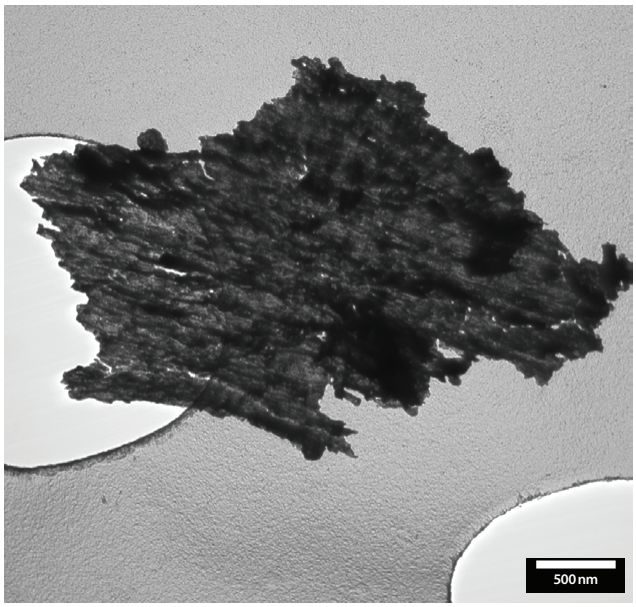


ED: Coral

Unstained section

Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure

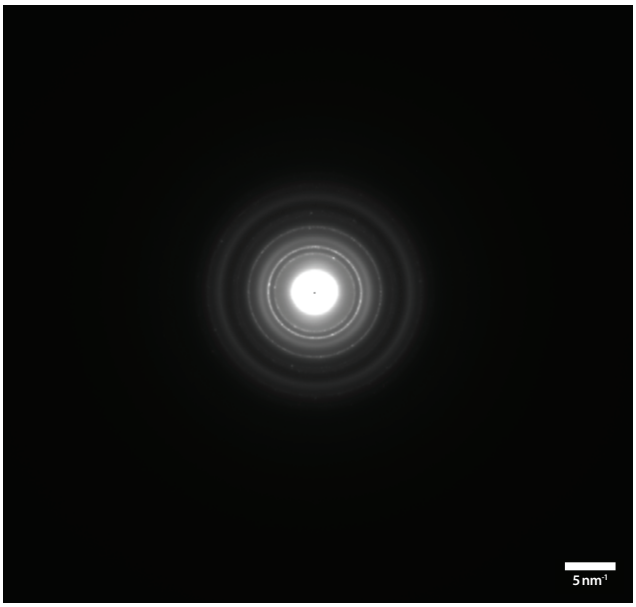
Sample courtesy of Helmut Gnaegi, Institute of Diatome Ltd.



TEM: Snail Shell

Unstained section

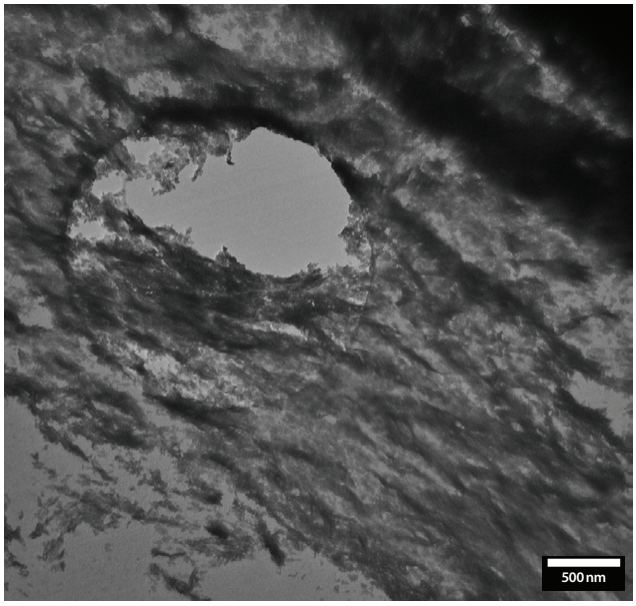
Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure



ED: Snail Shell

Unstained section

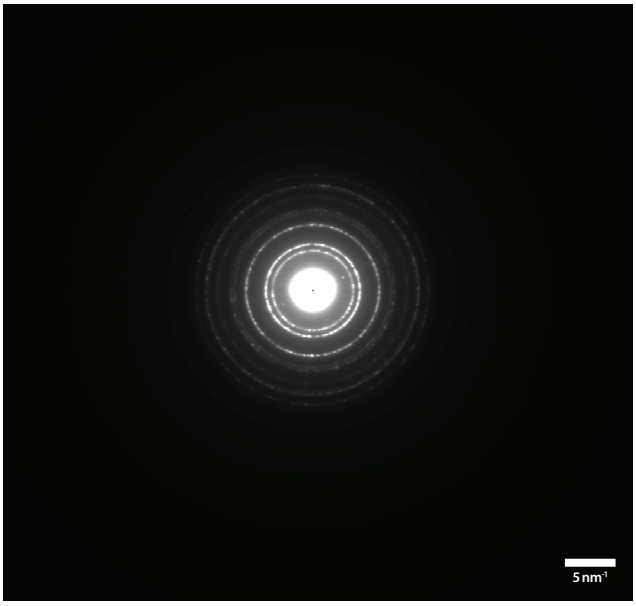
Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure



TEM: Bones (Wild Boar)

Unstained section

Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure

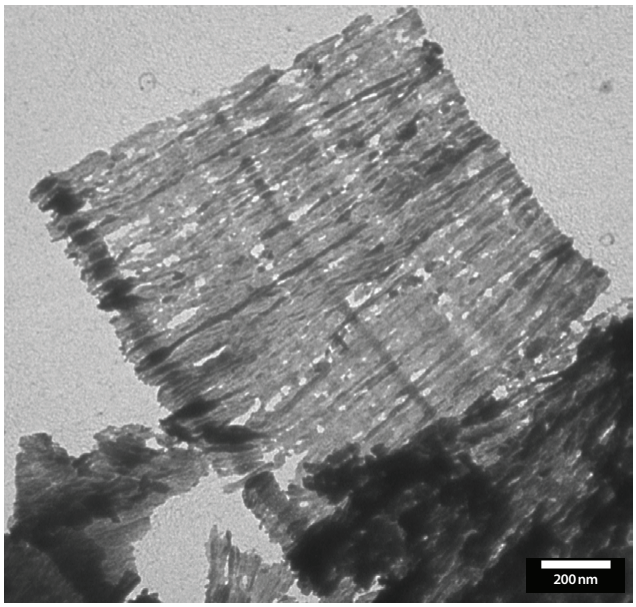


ED: Bones (Wild Boar)

Unstained section

Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure

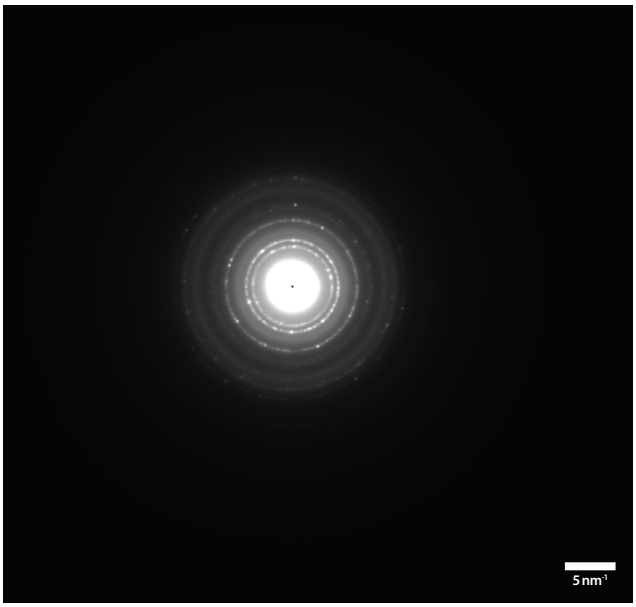
Sample courtesy of Helmut Gnaegi, Institute of Diatome Ltd.



TEM: Chihuahua Teeth

Unstained section

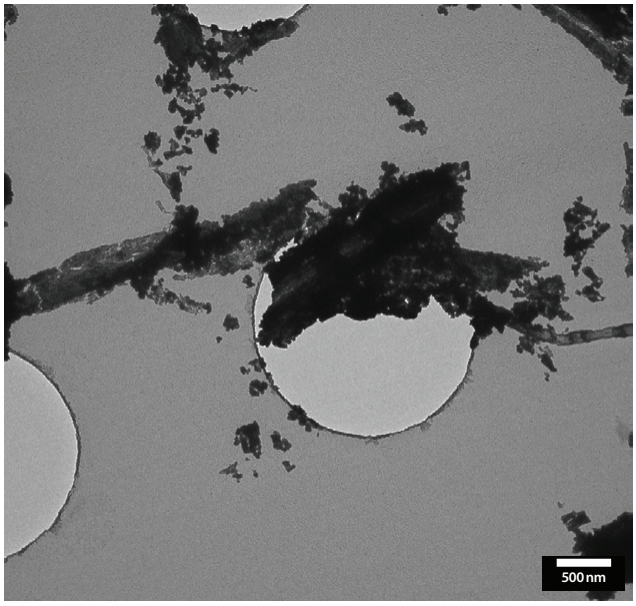
Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure



ED: Chihuahua Teeth

Unstained section

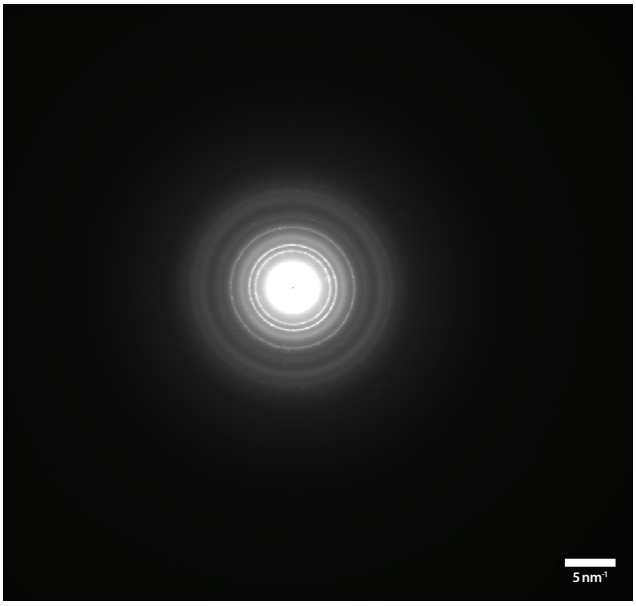
Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure



TEM: Baby Teeth

Unstained section

Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure

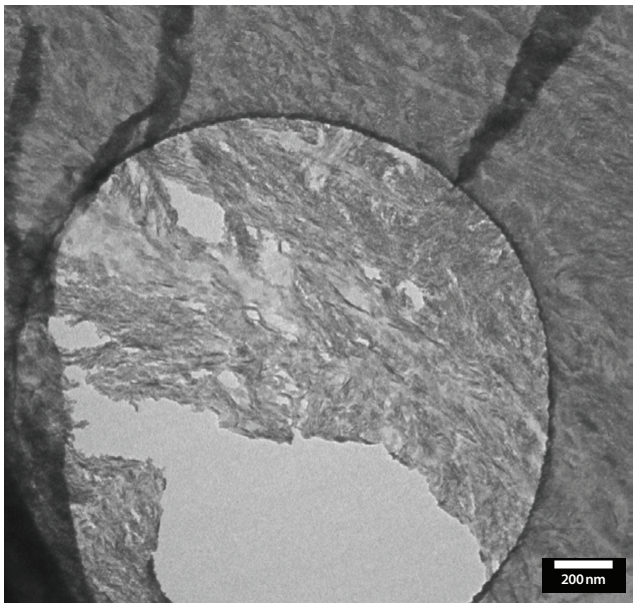


ED: Baby Teeth

Unstained section

Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure

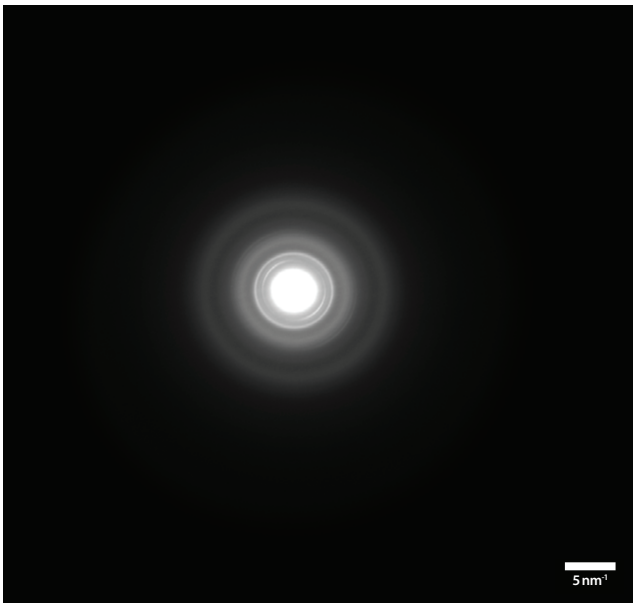
Sample courtesy of Helmut Gnaegi, Institute of Diatome Ltd.



TEM: Chicken Collarbone in Resin

Unstained section

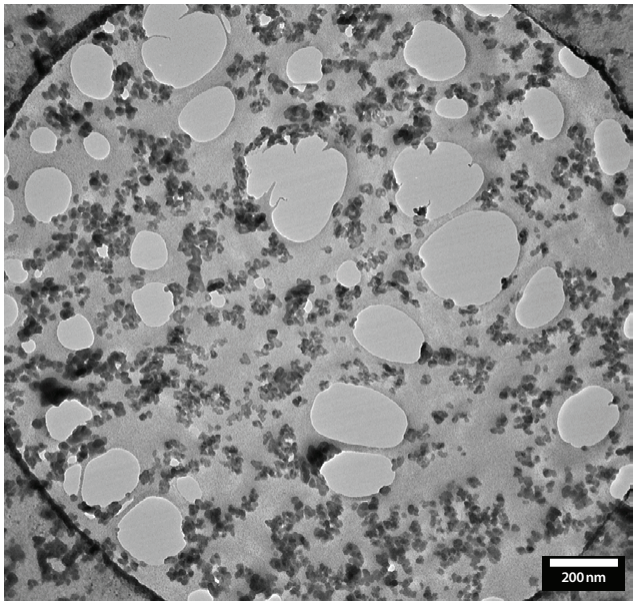
Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure



ED: Chicken Collarbone in Resin

Unstained section

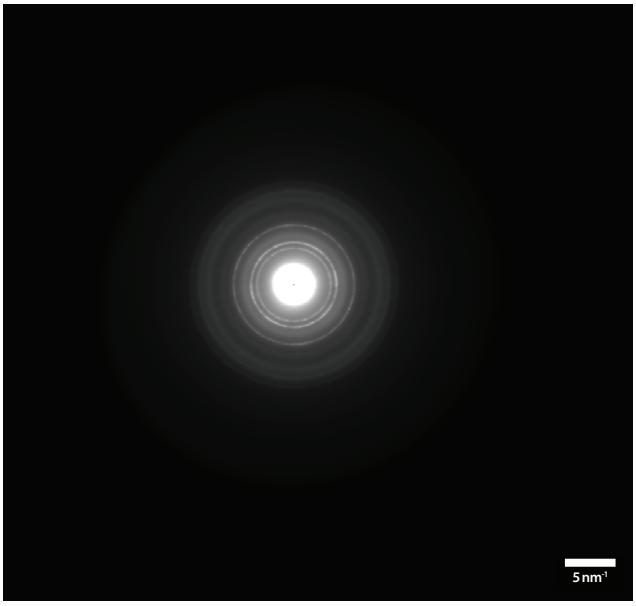
Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure



TEM: Eggshell

Unstained section

Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure

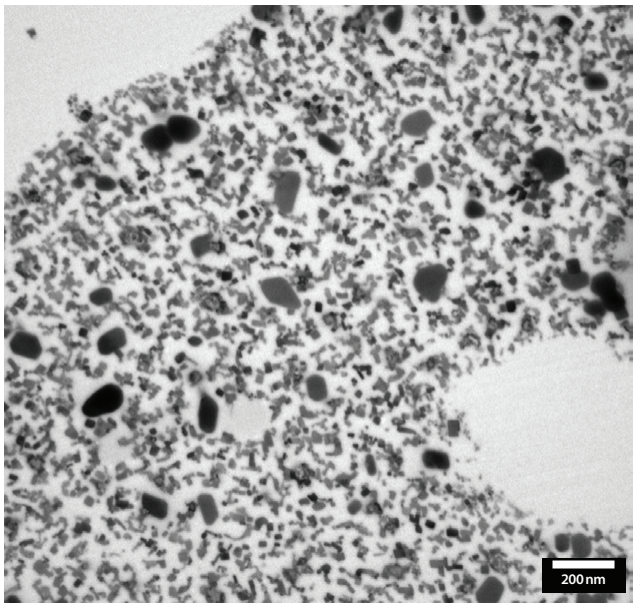


ED: Eggshell

Unstained section

Section with a cryo 35° knife, feed 15 nm, resp. 12 nm.
Point of interest: crystallographic structure

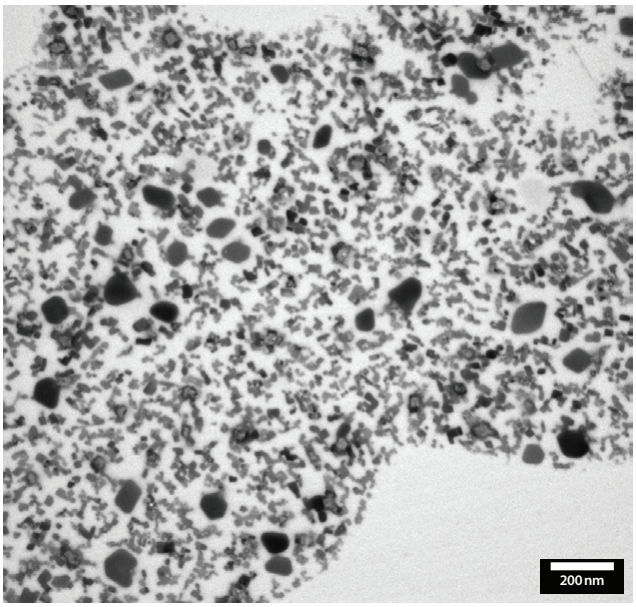
Sample courtesy of Helmut Gnaegi, Institute of Diatome Ltd.



TEM: Perovskite Nanorods

Particles on carbon film

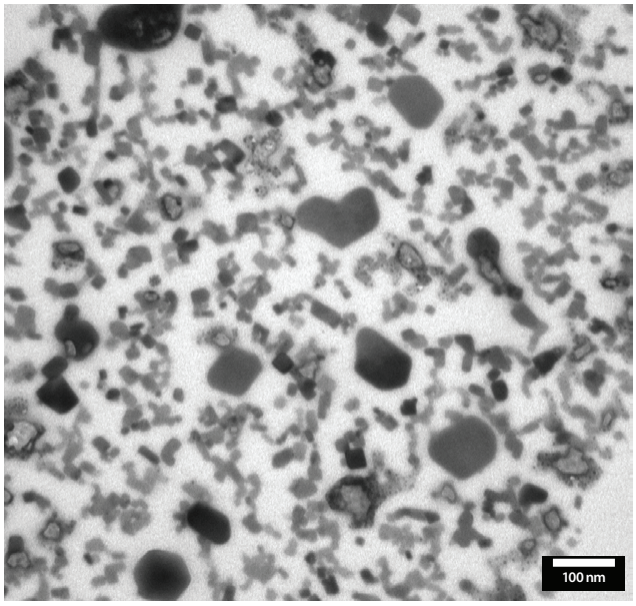
Point of interest: dimensions ratio



TEM: Perovskite Nanorods

Particles on carbon film

Point of interest: dimensions ratio



TEM: Perovskite Nanorods

Particles on carbon film

Point of interest: dimensions ratio

Sample courtesy of Assoc. Prof. Petr Dvořák, Ph.D., Institute of Physical Engineering, BUT