

TITLE	WEB LINK	CITATIONS
Kinking of GaP Nanowires Grown in an In Situ (S)TEM Gas Cell Holder	https://onlinelibrary.wiley.com/doi/10.1002/admi.202202507	Krug, David; Widemann, Maximilian; Gruber, Felix; Ahmed, Shamail; Demuth, Thomas; Beyer, Andreas; Volz, Kerstin , Kinking of GaP Nanowires Grown in an In Situ (S)TEM Gas Cell Holder, 2023, Advanced Materials Interfaces, 10.1002/admi.202202507
Formation mechanism of high-index faceted Pt-Bi alloy nanoparticles by evaporation-induced growth from metal salts	https://www.nature.com/articles/s41467-023-39458-6	Koo, Kunmo; Shen, Bo; Baik, Sung-Il; Mao, Zugang; Smeets, Paul J. M.; Cheuk, Ivan; He, Kun; Dos Reis, Roberto; Huang, Liliang; Ye, Zihao; Hu, Xiaobing; Mirkin, Chad A.; Dravid, Vinayak P. , Formation mechanism of high-index faceted Pt-Bi alloy nanoparticles by evaporation-induced growth from metal salts, 2023, Nature Communications, 10.1038/s41467-023-39458-6
In Situ TEM Study of the Genesis of Supported Nickel Catalysts	https://pubs.acs.org/doi/10.1021/acs.jpcc.3c01117	Turner, Savannah J.; Wezendonk, Dennie F. L.; Terorde, Robert J. A. M.; de Jong, Krijn P. , In Situ TEM Study of the Genesis of Supported Nickel Catalysts, 2023, The Journal of Physical Chemistry C, 10.1021/acs.jpcc.3c01117
Environment-Dependent Structural Evolution and Electrocatalytic Performance in N ₂ Reduction of Mo-Based ZIF-8	https://pubs.acs.org/doi/10.1021/acsanm.3c01669	Hsiao, Kai-Yuan; Tseng, Yu-Han; Chiang, Chao-Lung; Chen, Yan-De; Lin, Yan-Gu; Lu, Ming-Yen , Environment-Dependent Structural Evolution and Electrocatalytic Performance in N ₂ Reduction of Mo-Based ZIF-8, 2023, ACS Applied Nano Materials, 10.1021/acsanm.3c01669
Atomic Scale Observation of the Structural Dynamics of Supported Gold Nanocatalysts under 1,3-Butadiene by in situ Environmental Transmission Electron Microscopy	https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/cctc.202300434	Nassereddine, Abdallah; Delannoy, Laurent; Ricolleau, Christian; Louis, Catherine; Alloyeau, Damien; Wang, Guillaume; Wang, Qing; Guesmi, Hazar; Nelayah, Jaysen , Atomic Scale Observation of the Structural Dynamics of Supported Gold Nanocatalysts under 1,3-Butadiene by in situ Environmental Transmission Electron Microscopy, 2023, ChemCatChem, 10.1002/cctc.202300434
Visualizing the Flexibility of RHO Nanozeolite: Experiment and Modeling	https://pubs.acs.org/doi/10.1021/jacs.3c02822	Clatworthy, Edwin B.; Moldovan, Simona; Nakouri, Kalthoum; Gramatikov, Stoyan P.; Dalena, Francesco; Daturi, Marco; Petkov, Petko St.; Vayssilov, Georgi N.; Mintova, Svetlana , Visualizing the Flexibility of RHO Nanozeolite: Experiment and Modeling, 2023, Journal of the American Chemical Society, 10.1021/jacs.3c02822
Shedding Light on the Birth of Hybrid Perovskites: A Correlative Study by In Situ Electron Microscopy and Synchrotron-Based X-ray Scattering	https://pubs.acs.org/doi/10.1021/acs.chemmater.3c01167	Sidhoum, Charles; Constantin, Doru; Ihiwakrim, Dris; Lenertz, Marc; Bizien, Thomas; Sanchez, Clément; Ersen, Ovidiu , Shedding Light on the Birth of Hybrid Perovskites: A Correlative Study by In Situ Electron Microscopy and Synchrotron-Based X-ray Scattering, 2023, Chemistry of Materials, 10.1021/acs.chemmater.3c01167
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Synthesis, characterization, and preliminary insights of ZnFe ₂ O ₄ nanoparticles into potential applications, with a focus on gas sensing	https://www.nature.com/articles/s41598-023-46960-w	Abdulhamid, Zeyad M.; Dabbawala, Aasif A.; Delclos, Thomas; Straubinger, Rainer; Rueping, Magnus; Polychronopoulou, Kyriaki; Anjum, Dalaver H. , Synthesis, characterization, and preliminary insights of ZnFe ₂ O ₄ nanoparticles into potential applications, with a focus on gas sensing, 2023, Scientific Reports, 10.1038/s41598-023-46960-w
In situ TEM investigation of the oxide/metal interface during the annealing of anodically formed titanium dioxide nanotubes	https://link.springer.com/10.1007/s10853-023-09005-1	Malik, Hammad; Howard, Jerry R.; Van Devener, Brian; Mohanty, Swomitra Kumar; Carlson, Krista , In situ TEM investigation of the oxide/metal interface during the annealing of anodically formed titanium dioxide nanotubes, 2023, Journal of Materials Science, 10.1007/s10853-023-09005-1
Pathway to defective highly active and stable MoVSbOx catalysts for ethane oxidative dehydrogenation through a dislodging process involving controlled combustion of amino-organic compounds	https://linkinghub.elsevier.com/retrieve/pii/S0021951723003512	Valente, Jaime S.; Arnedáriz-Herrera, Héctor; Quintana-Solórzano, Roberto; Angeles-Chavez, Carlos; Rodríguez-Hernández, Andrea; Guzmán-Castillo, María L.; López Nieto, José M.; Mhin Nha Le, Thi; Millet, Jean-Marc M. , Pathway to defective highly active and stable MoVSbOx catalysts for ethane oxidative dehydrogenation through a dislodging process involving controlled combustion of amino-organic compounds, 2023, Journal of Catalysis, 10.1016/j.jcat.2023.115106
Direct Observation of Ni Nanoparticle Growth in Carbon-Supported Nickel under Carbon Dioxide Hydrogenation Atmosphere	https://pubs.acs.org/doi/10.1021/acs.nano.3c03721	Visser, Nienke L.; Turner, Savannah J.; Stewart, Joseph A.; Vandegheuchte, Bart D.; Van Der Hoeven, Jessi E. S.; De Jongh, Petra E. , Direct Observation of Ni Nanoparticle Growth in Carbon-Supported Nickel under Carbon Dioxide Hydrogenation Atmosphere, 2023, ACS Nano, 10.1021/acs.nano.3c03721
Carbon Nanofiber Growth Rates on NiCu Catalysts: Quantitative Coupling of Macroscopic and Nanoscale In Situ Studies	https://pubs.acs.org/doi/10.1021/acs.jpcc.3c02657	Welling, Tom A. J.; Schoemaker, Suzan E.; De Jong, Krijn P.; De Jongh, Petra E. , Carbon Nanofiber Growth Rates on NiCu Catalysts: Quantitative Coupling of Macroscopic and Nanoscale In Situ Studies, 2023, The Journal of Physical Chemistry C, 10.1021/acs.jpcc.3c02657



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A Novel Heating Technology for Ultra-High Resolution Imaging in Electron Microscopes	https://www.cambridge.org/core/journals/microscopy-today/article/novel-heating-technology-for-ultrahigh-resolution-imaging-in-electron-microscopes/5949C29C44409BC9D1E8AFDFE8C20B5	A Novel Heating Technology for Ultra-High Resolution Imaging in Electron Microscopes
Synthesis of mesoporous palladium with tunable porosity and demonstration of its thermal stability by in situ heating and environmental transmission electron microscopy	https://pubs.rsc.org/en/content/articlelanding/2013/ta/c2ta00190j	Synthesis of mesoporous palladium with tunable porosity and demonstration of its thermal stability by in situ heating and environmental transmission electron microscopy
Novel MEMS-Based Gas-Cell/Heating Specimen Holder Provides Advanced Imaging Capabilities for In Situ Reaction Studies	https://www.cambridge.org/core/product/identifier/S1431927612001249/type/journal_article	Novel MEMS-Based Gas-Cell/Heating Specimen Holder Provides Advanced Imaging Capabilities for In Situ Reaction Studies
In situ environmental transmission electron microscopy study of oxidation of two-dimensional Ti ₃ C ₂ and formation of carbon-supported TiO ₂	https://pubs.rsc.org/en/content/articlelanding/2014/ta/c4ta02583k	In situ environmental transmission electron microscopy study of oxidation of two-dimensional Ti ₃ C ₂ and formation of carbon-supported TiO ₂
Concurrent in situ ion irradiation transmission electron microscope	https://www.mendeley.com/catalogue/4c6114d4-a216-3012-bb1f-49f5e04bd40d/	Concurrent in situ ion irradiation transmission electron microscope
Dynamic structural evolution of supported palladium–ceria core–shell catalysts revealed by in situ electron microscopy	https://www.nature.com/articles/ncomms8778	Dynamic structural evolution of supported palladium–ceria core–shell catalysts revealed by in situ electron microscopy
Improved Thermal Stability and Methane-Oxidation Activity of Pd/Al ₂ O ₃ Catalysts by Atomic Layer Deposition of ZrO ₂	https://doi.org/10.1021/acscatal.5b01348	Improved Thermal Stability and Methane-Oxidation Activity of Pd/Al ₂ O ₃ Catalysts by Atomic Layer Deposition of ZrO ₂
Reversible Transformation of Pt Nanoparticles into Single Atoms inside High-Silica Chabazite Zeolite	https://doi.org/10.1021/jacs.6b10169	Reversible Transformation of Pt Nanoparticles into Single Atoms inside High-Silica Chabazite Zeolite
Correlation of morphology with catalytic performance of CrO _x /Ce _{0.2} Zr _{0.8} O ₂ catalysts for NO oxidation via in-situ STEM	http://www.sciencedirect.com/science/article/pii/S1385894715016666	Correlation of morphology with catalytic performance of CrO _x /Ce _{0.2} Zr _{0.8} O ₂ catalysts for NO oxidation via in-situ STEM
Revealing particle growth mechanisms by combining high-surface-area catalysts made with monodisperse particles and electron microscopy conducted at atmospheric pressure	http://www.sciencedirect.com/science/article/pii/S002195171600083X	Revealing particle growth mechanisms by combining high-surface-area catalysts made with monodisperse particles and electron microscopy conducted at atmospheric pressure
Dynamical Observation and Detailed Description of Catalysts under Strong Metal–Support Interaction	https://doi.org/10.1021/acs.nanolett.6b01769	Dynamical Observation and Detailed Description of Catalysts under Strong Metal–Support Interaction
Determination of the initial oxidation behavior of Zircaloy-4 by in-situ TEM	http://www.sciencedirect.com/science/article/pii/S0022311516300824	Determination of the initial oxidation behavior of Zircaloy-4 by in-situ TEM
Defects do Catalysis: CO Monolayer Oxidation and Oxygen Reduction Reaction on Hollow PtNi/C Nanoparticles	https://doi.org/10.1021/acscatal.6b01106	Defects do Catalysis: CO Monolayer Oxidation and Oxygen Reduction Reaction on Hollow PtNi/C Nanoparticles
Preparation and Loading Process of Single Crystalline Samples into a Gas Environmental Cell Holder for In Situ Atomic Resolution Scanning Transmission Electron Microscopic Observation	https://www.cambridge.org/core/journals/microscopy-and-microanalysis/article/abs/preparation-and-loading-process-of-single-crystalline-samples-into-a-gas-environmental-cell-holder-for-in-situ-atomic-resolution-scanning-transmission-electron-microscopic-observation/C4A0371B31BC03D26CB7751820052D44	Preparation and Loading Process of Single Crystalline Samples into a Gas Environmental Cell Holder for In Situ Atomic Resolution Scanning Transmission Electron Microscopic Observation

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Sample Preparation Methodologies for In Situ Liquid and Gaseous Cell Analytical Transmission Electron Microscopy of Electropolished Specimens	https://www.cambridge.org/core/journals/microscopy-and-microanalysis/article/abs/sample-preparation-methodologies-for-in-situ-liquid-and-gaseous-cell-analytical-transmission-electron-microscopy-of-electropolished-specimens/2EF60DDA6421035B91C31E0C13B2B902	Sample Preparation Methodologies for In Situ Liquid and Gaseous Cell Analytical Transmission Electron Microscopy of Electropolished Specimens
Diphosphine-Protected Au 22 Nanoclusters on Oxide Supports Are Active for Gas-Phase Catalysis without Ligand Removal	https://pubs.acs.org/doi/10.1021/acs.nanolett.6b03221	Diphosphine-Protected Au 22 Nanoclusters on Oxide Supports Are Active for Gas-Phase Catalysis without Ligand Removal
Catalytic Nanopatterning of Few-Layer Graphene	https://hal.archives-ouvertes.fr/hal-02182887	Catalytic Nanopatterning of Few-Layer Graphene
In Situ Solid–Gas Reactivity of Nanoscaled Metal Borides from Molten Salt Synthesis	https://doi.org/10.1021/acs.inorgchem.7b01279	In Situ Solid–Gas Reactivity of Nanoscaled Metal Borides from Molten Salt Synthesis
Adsorbate-mediated strong metal–support interactions in oxide-supported Rh catalysts	https://www.nature.com/articles/nchem.2607	Adsorbate-mediated strong metal–support interactions in oxide-supported Rh catalysts
Revealing Surface Elemental Composition and Dynamic Processes Involved in Facet-Dependent Oxidation of Pt3Co Nanoparticles via in Situ Transmission Electron Microscopy	https://doi.org/10.1021/acs.nanolett.7b01325	Revealing Surface Elemental Composition and Dynamic Processes Involved in Facet-Dependent Oxidation of Pt3Co Nanoparticles via in Situ Transmission Electron Microscopy
Platinum-Based Nanowires as Active Catalysts toward Oxygen Reduction Reaction: In Situ Observation of Surface-Diffusion-Assisted, Solid-State Oriented Attachment	https://onlinelibrary.wiley.com/doi/abs/10.1002/adma.201703460	Platinum-Based Nanowires as Active Catalysts toward Oxygen Reduction Reaction: In Situ Observation of Surface-Diffusion-Assisted, Solid-State Oriented Attachment
Quantitative and Atomic-Scale View of CO-Induced Pt Nanoparticle Surface Reconstruction at Saturation Coverage via DFT Calculations Coupled with in Situ TEM and IR	https://doi.org/10.1021/jacs.7b01081	Quantitative and Atomic-Scale View of CO-Induced Pt Nanoparticle Surface Reconstruction at Saturation Coverage via DFT Calculations Coupled with in Situ TEM and IR
Integrated In Situ Characterization of a Molten Salt Catalyst Surface: Evidence of Sodium Peroxide and Hydroxyl Radical Formation	https://onlinelibrary.wiley.com/doi/abs/10.1002/anie.201704758	Integrated In Situ Characterization of a Molten Salt Catalyst Surface: Evidence of Sodium Peroxide and Hydroxyl Radical Formation
In situ atomic-scale observation of oxygen-driven core-shell formation in Pt 3 Co nanoparticles	https://www.nature.com/articles/s41467-017-00161-y	In situ atomic-scale observation of oxygen-driven core-shell formation in Pt 3 Co nanoparticles
High-temperature electron microscopy study of ThO2 microspheres sintering	http://www.sciencedirect.com/science/article/pii/S0955221916304630	High-temperature electron microscopy study of ThO2 microspheres sintering
In Situ Atomic-Scale Observation of the Two-Dimensional Co(OH)2 Transition at Atmospheric Pressure	https://doi.org/10.1021/acs.chemmater.7b01291	In Situ Atomic-Scale Observation of the Two-Dimensional Co(OH)2 Transition at Atmospheric Pressure
In Situ Industrial Bimetallic Catalyst Characterization using Scanning Transmission Electron Microscopy and X-ray Absorption Spectroscopy at One Atmosphere and Elevated Temperature	https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/cphc.201700425	In Situ Industrial Bimetallic Catalyst Characterization using Scanning Transmission Electron Microscopy and X-ray Absorption Spectroscopy at One Atmosphere and Elevated Temperature

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In Situ Thermal Annealing Transmission Electron Microscopy (TEM) Investigation of III/V Semiconductor Heterostructures Using a Setup for Safe Usage of Toxic and Pyrophoric Gases	https://academic.oup.com/mam/article-abstract/23/4/751/6896748?redirectedFrom=fulltext	In Situ Thermal Annealing Transmission Electron Microscopy (TEM) Investigation of III/V Semiconductor Heterostructures Using a Setup for Safe Usage of Toxic and Pyrophoric Gases
Role of 2D and 3D defects on the reduction of LaNiO ₃ nanoparticles for catalysis	https://www.nature.com/articles/s41598-017-10703-5	Role of 2D and 3D defects on the reduction of LaNiO ₃ nanoparticles for catalysis
Layer-by-Layer Degradation of Methylammonium Lead Tri-iodide Perovskite Microplates	http://www.sciencedirect.com/science/article/pii/S2542435117300302	Layer-by-Layer Degradation of Methylammonium Lead Tri-iodide Perovskite Microplates
The application of in situ analytical transmission electron microscopy to the study of preferential intergranular oxidation in Alloy 600	http://www.sciencedirect.com/science/article/pii/S0304399116303345	The application of in situ analytical transmission electron microscopy to the study of preferential intergranular oxidation in Alloy 600
NiAl Oxidation Reaction Processes Studied In Situ Using MEMS-Based Closed-Cell Gas Reaction Transmission Electron Microscopy	https://link.springer.com/article/10.1007/s11085-016-9676-2	NiAl Oxidation Reaction Processes Studied In Situ Using MEMS-Based Closed-Cell Gas Reaction Transmission Electron Microscopy
An in situ and ex situ TEM study into the oxidation of titanium (IV) sulphide	https://www.nature.com/articles/s41699-017-0024-4	An in situ and ex situ TEM study into the oxidation of titanium (IV) sulphide
In Situ Observation of Rh-CaTiO ₃ Catalysts during Reduction and Oxidation Treatments by Transmission Electron Microscopy	https://doi.org/10.1021/acscatal.6b03604	In Situ Observation of Rh-CaTiO ₃ Catalysts during Reduction and Oxidation Treatments by Transmission Electron Microscopy
Multislice simulations for in-situ HRTEM studies of nanostructured magnesium hydride at ambient hydrogen pressure	http://www.sciencedirect.com/science/article/pii/S0304399117300529	Multislice simulations for in-situ HRTEM studies of nanostructured magnesium hydride at ambient hydrogen pressure
Thermal behavior of Pd@SiO ₂ nanostructures in various gas environments: a combined 3D and in situ TEM approach	https://pubs.rsc.org/en/content/articlelanding/2018/nr/c8nr06951d	Thermal behavior of Pd@SiO ₂ nanostructures in various gas environments: a combined 3D and in situ TEM approach
In situ Atmospheric Transmission Electron Microscopy of Catalytic Nanomaterials	https://www.cambridge.org/core/journals/mrs-advances/article/in-situ-atmospheric-transmission-electron-microscopy-of-catalytic-nanomaterials/71F8D0135EF96CD595956DBD2422D116	In situ Atmospheric Transmission Electron Microscopy of Catalytic Nanomaterials
Direct Measurement of the Surface Energy of Bimetallic Nanoparticles: Evidence of Vegard's Rule-like Dependence	https://link.aps.org/doi/10.1103/PhysRevLett.120.025901	Direct Measurement of the Surface Energy of Bimetallic Nanoparticles: Evidence of Vegard's Rule-like Dependence
In situ insight into the unconventional ruthenium catalyzed growth of carbon nanostructures	https://pubs.rsc.org/en/content/articlelanding/2018/nr/c8nr01227j	In situ insight into the unconventional ruthenium catalyzed growth of carbon nanostructures
Thermally Introduced Bismuth Clustering in Ga(P,Bi) Layers under Group V Stabilised Conditions Investigated by Atomic Resolution In Situ (S)TEM	https://www.nature.com/articles/s41598-018-27286-4	Thermally Introduced Bismuth Clustering in Ga(P,Bi) Layers under Group V Stabilised Conditions Investigated by Atomic Resolution In Situ (S)TEM
Insight by In Situ Gas Electron Microscopy on the Thermal Behaviour and Surface Reactivity of Cobalt Nanoparticles	https://chemistry-europe.onlinelibrary.wiley.com/doi/abs/10.1002/cctc.201800854	Insight by In Situ Gas Electron Microscopy on the Thermal Behaviour and Surface Reactivity of Cobalt Nanoparticles



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Reactivity and structural evolution of urchin-like Co nanostructures under controlled environments	https://onlinelibrary.wiley.com/doi/abs/10.1111/jmi.12656	Reactivity and structural evolution of urchin-like Co nanostructures under controlled environments
Analytical and in situ Applications Using Aberration Corrected Scanning Transmission Electron Microscope	https://www.jstage.jst.go.jp/article/ejssnt/16/0/16_286/article	Analytical and in situ Applications Using Aberration Corrected Scanning Transmission Electron Microscope
Deconvolution of octahedral Pt ₃ Ni nanoparticle growth pathway from in situ characterizations	http://www.nature.com/articles/s41467-018-06900-z	Deconvolution of octahedral Pt ₃ Ni nanoparticle growth pathway from in situ characterizations
Combining In-Situ Transmission Electron Microscopy and Infrared Spectroscopy for Understanding Dynamic and Atomic-Scale Features of Supported Metal Catalysts	https://pubs.acs.org/doi/10.1021/acs.jpcc.8b03959	Combining In-Situ Transmission Electron Microscopy and Infrared Spectroscopy for Understanding Dynamic and Atomic-Scale Features of Supported Metal Catalysts
Oxidation-Induced Atom Diffusion and Surface Restructuring in Faceted Ternary Pt–Cu–Ni Nanoparticles	https://doi.org/10.1021/acs.chemmater.8b05199	Oxidation-Induced Atom Diffusion and Surface Restructuring in Faceted Ternary Pt–Cu–Ni Nanoparticles
Bimetallic Phosphide (Ni,Cu) ₂ P Nanoparticles by Inward Phosphorus Migration and Outward Copper Migration	https://doi.org/10.1021/acs.chemmater.9b01505	Bimetallic Phosphide (Ni,Cu) ₂ P Nanoparticles by Inward Phosphorus Migration and Outward Copper Migration
Toward 3D imaging of corrosion at the nanoscale: Cross-sectional analysis of in-situ oxidized TEM samples	http://www.sciencedirect.com/science/article/pii/S0968432818302828	Toward 3D imaging of corrosion at the nanoscale: Cross-sectional analysis of in-situ oxidized TEM samples
Structural evolution of atomically dispersed Pt catalysts dictates reactivity	https://www.nature.com/articles/s41563-019-0349-9	Structural evolution of atomically dispersed Pt catalysts dictates reactivity
Morphological and compositional changes of MFe ₂ O ₄ @Co ₃ O ₄ (M = Ni, Zn) core-shell nanoparticles after mild reduction	http://www.sciencedirect.com/science/article/pii/S1044580318328262	Morphological and compositional changes of MFe ₂ O ₄ @Co ₃ O ₄ (M = Ni, Zn) core-shell nanoparticles after mild reduction
In situ Scanning Transmission Electron Microscopy with Atomic Resolution under Atmospheric Pressure	https://www.cambridge.org/core/journals/microscopy-today/article/in-situ-scanning-transmission-electron-microscopy-with-atomic-resolution-under-atmospheric-pressure/55D8A0C1194DACD2E1D7685406CE2193	In situ Scanning Transmission Electron Microscopy with Atomic Resolution under Atmospheric Pressure
Motion of crystalline inclusions by interface diffusion in the proximity of free surfaces	https://doi.org/10.1007/s11051-019-4658-3	Motion of crystalline inclusions by interface diffusion in the proximity of free surfaces
In situ characterization of kinetics and mass transport of PbSe nanowire growth via LS and VLS mechanisms	http://xlink.rsc.org/?DOI=C9NR01200A	In situ characterization of kinetics and mass transport of PbSe nanowire growth via LS and VLS mechanisms
Reshaping Dynamics of Gold Nanoparticles under H ₂ and O ₂ at Atmospheric Pressure	https://pubs.acs.org/doi/10.1021/acsnano.8b08530	Reshaping Dynamics of Gold Nanoparticles under H ₂ and O ₂ at Atmospheric Pressure
Sintering of cobalt during FTS: Insights from industrial and model systems	http://www.sciencedirect.com/science/article/pii/S0920586118309088	Sintering of cobalt during FTS: Insights from industrial and model systems
Atomic Scale Insight into the Formation, Size, and Location of Platinum Nanoparticles Supported on γ -Alumina	https://doi.org/10.1021/acscatal.0c00042	Atomic Scale Insight into the Formation, Size, and Location of Platinum Nanoparticles Supported on γ -Alumina

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Nanoscale temperature measurement during temperature controlled in situ TEM using Al plasmon nanothermometry	http://www.sciencedirect.com/science/article/pii/S0304399119300932	Nanoscale temperature measurement during temperature controlled in situ TEM using Al plasmon nanothermometry
Direct Microscopic Proof of the Fermi Level Pinning Gas-Sensing Mechanism: The Case of Platinum-Loaded WO ₃	https://doi.org/10.1021/acs.jpcllett.9b03114	Direct Microscopic Proof of the Fermi Level Pinning Gas-Sensing Mechanism: The Case of Platinum-Loaded WO ₃
In-situ transmission electron microscopy investigation of the influence of hydrogen on the oxidation mechanisms of fine grained magnesium	http://www.sciencedirect.com/science/article/pii/S0254058420303059	In-situ transmission electron microscopy investigation of the influence of hydrogen on the oxidation mechanisms of fine grained magnesium
In Situ Oxidation Studies of High-Entropy Alloy Nanoparticles	https://pubs.acs.org/doi/10.1021/acsnano.0c05250	In Situ Oxidation Studies of High-Entropy Alloy Nanoparticles
Introducing and Controlling Water Vapor in Closed-Cell In Situ Electron Microscopy Gas Reactions	https://www.cambridge.org/core/journals/microscopy-and-microanalysis/article/abs/introducing-and-controlling-water-vapor-in-closedcell-in-situ-electron-microscopy-gas-reactions/51C2F813D9803452A7B556AB720FFDBA	Introducing and Controlling Water Vapor in Closed-Cell In Situ Electron Microscopy Gas Reactions
Quo Vadis Micro-Electro-Mechanical Systems for the Study of Heterogeneous Catalysts Inside the Electron Microscope?	http://link.springer.com/10.1007/s11244-020-01398-6	Quo Vadis Micro-Electro-Mechanical Systems for the Study of Heterogeneous Catalysts Inside the Electron Microscope?
Aerosol synthesis of thermally stable porous noble metals and alloys by using bi-functional templates	http://xlink.rsc.org/?DOI=C9MH01408J	Aerosol synthesis of thermally stable porous noble metals and alloys by using bi-functional templates
Insight on thermal stability of magnetite magnetosomes: implications for the fossil record and biotechnology	http://www.nature.com/articles/s41598-020-63531-5	Insight on thermal stability of magnetite magnetosomes: implications for the fossil record and biotechnology
Mobility and versatility of the liquid bismuth promoter in the working iron catalysts for light olefin synthesis from syngas	http://xlink.rsc.org/?DOI=D05C01600D	Mobility and versatility of the liquid bismuth promoter in the working iron catalysts for light olefin synthesis from syngas
Iron-silica interaction during reduction of precipitated silica-promoted iron oxides using in situ XRD and TEM	https://www.sciencedirect.com/science/article/pii/S0926860X21000454	Iron-silica interaction during reduction of precipitated silica-promoted iron oxides using in situ XRD and TEM
An in situ investigation of the thermal decomposition of metal-organic framework NH ₂ -MIL-125 (Ti)	https://linkinghub.elsevier.com/retrieve/pii/S1387181121000834	An in situ investigation of the thermal decomposition of metal-organic framework NH ₂ -MIL-125 (Ti)
Catalysts by pyrolysis: Direct observation of chemical and morphological transformations leading to transition metal-nitrogen-carbon materials	https://www.sciencedirect.com/science/article/pii/S136970212100050X	Catalysts by pyrolysis: Direct observation of chemical and morphological transformations leading to transition metal-nitrogen-carbon materials
In Situ TEM Study of Rh Particle Sintering for Three-Way Catalysts in High Temperatures	https://www.mdpi.com/2073-4344/11/1/19	In Situ TEM Study of Rh Particle Sintering for Three-Way Catalysts in High Temperatures
In situ STEM study on the morphological evolution of copper-based nanoparticles during high-temperature redox reactions	https://pubs.rsc.org/en/content/articlelanding/2021/nr/d1nr01648b	In situ STEM study on the morphological evolution of copper-based nanoparticles during high-temperature redox reactions
Revealing Size Dependent Structural Transitions in Supported Gold Nanoparticles in Hydrogen at Atmospheric Pressure	https://onlinelibrary.wiley.com/doi/abs/10.1002/sml.202104571	Revealing Size Dependent Structural Transitions in Supported Gold Nanoparticles in Hydrogen at Atmospheric Pressure

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Operando Electron Microscopy Study of Cobalt-based Fischer-Tropsch Nanocatalysts	https://onlinelibrary.wiley.com/doi/abs/10.1002/cctc.202001074	Operando Electron Microscopy Study of Cobalt-based Fischer-Tropsch Nanocatalysts
Dynamic restructuring of supported metal nanoparticles and its implications for structure insensitive catalysis	https://www.nature.com/articles/s41467-021-27474-3	Dynamic restructuring of supported metal nanoparticles and its implications for structure insensitive catalysis
Galvanic Transformation Dynamics in Heterostructured Nanoparticles	https://onlinelibrary.wiley.com/doi/abs/10.1002/adfm.202105866	Galvanic Transformation Dynamics in Heterostructured Nanoparticles
Role of Metal Vacancies in the Mechanism of Thermal Degradation of InGaN Quantum Wells	https://pubs.acs.org/doi/abs/10.1021/acsami.0c21293	Role of Metal Vacancies in the Mechanism of Thermal Degradation of InGaN Quantum Wells
Practical Aspects of Performing Quantitative EELS Measurements of Gas Compositions in Closed-Cell Gas Reaction S/TEM	https://www.cambridge.org/core/product/identifier/S1431927621003160/type/journal_article	Practical Aspects of Performing Quantitative EELS Measurements of Gas Compositions in Closed-Cell Gas Reaction S/TEM
Understanding Cu-Alumina Interactions in Redox Conditions for Chemical Looping Combustion (CLC) Application – A Multi-scale Correlative Electron and X-Ray Microscopy Study	https://www.cambridge.org/core/product/identifier/S1431927621013283/type/journal_article	Understanding Cu-Alumina Interactions in Redox Conditions for Chemical Looping Combustion (CLC) Application – A Multi-scale Correlative Electron and X-Ray Microscopy Study
Probing the Formation of Lithium Metal in an Inert Atmosphere by Big Data-Driven In Situ Electron Microscopy	https://pubs.acs.org/doi/10.1021/acsaem.1c01321	Probing the Formation of Lithium Metal in an Inert Atmosphere by Big Data-Driven In Situ Electron Microscopy
Is There Really a Size effect on the Surface Energy of Nanoparticles?	https://hal.science/hal-03310351/document	Is There Really a Size effect on the Surface Energy of Nanoparticles?
Stabilization of Metal Single Atoms on Carbon and TiO ₂ Supports for CO ₂ Hydrogenation: The Importance of Regulating Charge Transfer	https://onlinelibrary.wiley.com/doi/10.1002/admi.202001777	Stabilization of Metal Single Atoms on Carbon and TiO ₂ Supports for CO ₂ Hydrogenation: The Importance of Regulating Charge Transfer
Nanoscale oxidation behavior of carbon fibers revealed with in situ gas cell STEM	https://linkinghub.elsevier.com/retrieve/pii/S1359646221001007	Nanoscale oxidation behavior of carbon fibers revealed with in situ gas cell STEM
Anisotropic growth of Pt on Pd nanocube promotes direct synthesis of hydrogen peroxide	https://linkinghub.elsevier.com/retrieve/pii/S0169433221011077	Anisotropic growth of Pt on Pd nanocube promotes direct synthesis of hydrogen peroxide
A multiscale in situ high temperature high resolution transmission electron microscopy study of ThO ₂ sintering	http://xlink.rsc.org/?DOI=D1NR00956G	A multiscale in situ high temperature high resolution transmission electron microscopy study of ThO ₂ sintering
In situ observation of the crystal structure transition of Pt–Sn intermetallic nanoparticles during deactivation and regeneration	https://pubs.rsc.org/en/content/articlelanding/2021/cc/d1cc01181b#	In situ observation of the crystal structure transition of Pt–Sn intermetallic nanoparticles during deactivation and regeneration
Template-free synthesis of a yolk–shell Co ₃ O ₄ /nitrogen-doped carbon microstructure for excellent lithium ion storage	https://pubs.rsc.org/en/content/articlelanding/2021/ta/d1ta07221h	Template-free synthesis of a yolk–shell Co ₃ O ₄ /nitrogen-doped carbon microstructure for excellent lithium ion storage
Liquid Processing of Bismuth–Silica Nanoparticle/Aluminum Matrix Nanocomposites for Heat Storage Applications	https://pubs.acs.org/doi/10.1021/acsnm.1c03534	Liquid Processing of Bismuth–Silica Nanoparticle/Aluminum Matrix Nanocomposites for Heat Storage Applications

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In situ imaging of the sorption-induced subcell topological flexibility of a rigid zeolite framework	https://www.science.org/doi/10.1126/science.abn7667	In situ imaging of the sorption-induced subcell topological flexibility of a rigid zeolite framework
Layer-by-layer growth of bilayer graphene single-crystals enabled by self-transmitting catalytic activity	https://arxiv.org/abs/2205.01468	Layer-by-layer growth of bilayer graphene single-crystals enabled by self-transmitting catalytic activity
Polymer-Mediated Particle Coarsening within Hollow Silica Shell Nanoreactors	https://pubs.acs.org/doi/10.1021/acs.chemmater.2c00510	Polymer-Mediated Particle Coarsening within Hollow Silica Shell Nanoreactors
In Situ Visualization on Surface Oxidative Corrosion with Free Radicals: Black Phosphorus Nanoflake as an Example	https://pubs.acs.org/doi/10.1021/acs.est.1c06567	In Situ Visualization on Surface Oxidative Corrosion with Free Radicals: Black Phosphorus Nanoflake as an Example
Cu segregation in Au-Cu nanoparticles exposed to hydrogen atmospheric pressure: how is fcc symmetry maintained?	https://pubs.rsc.org/en/content/articlelanding/2022/fd/d2fd00130f	Cu segregation in Au-Cu nanoparticles exposed to hydrogen atmospheric pressure: how is fcc symmetry maintained?
Atomic imaging of zeolite-confined single molecules by electron microscopy	https://www.nature.com/articles/s41586-022-04876-x	Atomic imaging of zeolite-confined single molecules by electron microscopy
High-Entropy-Alloy Nanocrystal Based Macro- and Mesoporous Materials	https://pubs.acs.org/doi/10.1021/acsnano.2c05465	High-Entropy-Alloy Nanocrystal Based Macro- and Mesoporous Materials
Atomic-level structural responsiveness to environmental conditions from 3D electron diffraction	https://www.nature.com/articles/s41467-022-34237-1	Atomic-level structural responsiveness to environmental conditions from 3D electron diffraction
Visualizing the Formation of High-Entropy Fluorite Oxides from an Amorphous Precursor at Atomic Resolution	https://pubs.acs.org/doi/10.1021/acsnano.2c09760	Visualizing the Formation of High-Entropy Fluorite Oxides from an Amorphous Precursor at Atomic Resolution
In Situ TEM Study of the Genesis of Supported Nickel Catalysts	https://pubs.acs.org/doi/10.1021/acs.jpcc.3c01117	In Situ TEM Study of the Genesis of Supported Nickel Catalysts
Kinking of GaP Nanowires Grown in an In Situ (S)TEM Gas Cell Holder	https://onlinelibrary.wiley.com/doi/10.1002/admi.202202507	Kinking of GaP Nanowires Grown in an In Situ (S)TEM Gas Cell Holder
Environment-Dependent Structural Evolution and Electrocatalytic Performance in N ₂ Reduction of Mo-Based ZIF-8	https://pubs.acs.org/doi/10.1021/acsnanm.3c01669	Environment-Dependent Structural Evolution and Electrocatalytic Performance in N ₂ Reduction of Mo-Based ZIF-8
Formation mechanism of high-index faceted Pt-Bi alloy nanoparticles by evaporation-induced growth from metal salts	https://www.nature.com/articles/s41467-023-39458-6	Formation mechanism of high-index faceted Pt-Bi alloy nanoparticles by evaporation-induced growth from metal salts
Atomic Scale Observation of the Structural Dynamics of Supported Gold Nanocatalysts under 1,3-Butadiene by in situ Environmental Transmission Electron Microscopy	https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/cctc.202300434	Atomic Scale Observation of the Structural Dynamics of Supported Gold Nanocatalysts under 1,3-Butadiene by in situ Environmental Transmission Electron Microscopy
Visualizing the Flexibility of RHO Nanozeolite: Experiment and Modeling	https://pubs.acs.org/doi/10.1021/jacs.3c02822	Visualizing the Flexibility of RHO Nanozeolite: Experiment and Modeling

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Shedding Light on the Birth of Hybrid Perovskites: A Correlative Study by In Situ Electron Microscopy and Synchrotron-Based X-ray Scattering	https://pubs.acs.org/doi/10.1021/acs.chemmater.3c01167	Shedding Light on the Birth of Hybrid Perovskites: A Correlative Study by In Situ Electron Microscopy and Synchrotron-Based X-ray Scattering
How Pt Influences H ₂ Reactions on High Surface-Area Pt/CeO ₂ Powder Catalyst Surfaces	https://pubs.acs.org/doi/10.1021/jacsau.3c00330	How Pt Influences H ₂ Reactions on High Surface-Area Pt/CeO ₂ Powder Catalyst Surfaces
Synthesis, characterization, and preliminary insights of ZnFe ₂ O ₄ nanoparticles into potential applications, with a focus on gas sensing	https://www.nature.com/articles/s41598-023-46960-w	Synthesis, characterization, and preliminary insights of ZnFe ₂ O ₄ nanoparticles into potential applications, with a focus on gas sensing
In situ TEM investigation of the oxide/metal interface during the annealing of anodically formed titanium dioxide nanotubes	https://link.springer.com/10.1007/s10853-023-09005-1	In situ TEM investigation of the oxide/metal interface during the annealing of anodically formed titanium dioxide nanotubes
Pathway to defective highly active and stable MoV ₅ SbO _x catalysts for ethane oxidative dehydrogenation through a dislodging process involving controlled combustion of amino-organic compounds	https://linkinghub.elsevier.com/retrieve/pii/S0021951723003512	Pathway to defective highly active and stable MoV ₅ SbO _x catalysts for ethane oxidative dehydrogenation through a dislodging process involving controlled combustion of amino-organic compounds
Direct Observation of Ni Nanoparticle Growth in Carbon-Supported Nickel under Carbon Dioxide Hydrogenation Atmosphere	https://pubs.acs.org/doi/10.1021/acs.nano.3c03721	Direct Observation of Ni Nanoparticle Growth in Carbon-Supported Nickel under Carbon Dioxide Hydrogenation Atmosphere
Carbon Nanofiber Growth Rates on NiCu Catalysts: Quantitative Coupling of Macroscopic and Nanoscale In Situ Studies	https://pubs.acs.org/doi/10.1021/acs.jpcc.3c02657	Carbon Nanofiber Growth Rates on NiCu Catalysts: Quantitative Coupling of Macroscopic and Nanoscale In Situ Studies
Metal Organic Vapor Phase Epitaxy in a Transmission Electron Microscope	https://onlinelibrary.wiley.com/doi/10.1002/smt.202301079	Metal Organic Vapor Phase Epitaxy in a Transmission Electron Microscope
Visualization of the structural transformation of NiO/YSZ/BZY nanocomposite particles using in situ gas environmental transmission electron microscopy	http://xlink.rsc.org/?DOI=D3NR04525K	Visualization of the structural transformation of NiO/YSZ/BZY nanocomposite particles using in situ gas environmental transmission electron microscopy
Elucidating the Reaction Pathway in the Ammonolysis of MoO ₃ via In Situ Powder X-ray Diffraction and Transmission Electron Microscopy	https://pubs.acs.org/doi/10.1021/acs.chemmater.3c01344	Elucidating the Reaction Pathway in the Ammonolysis of MoO ₃ via In Situ Powder X-ray Diffraction and Transmission Electron Microscopy
Oscillatory phase transition induced structural extension during iron oxide reduction	https://linkinghub.elsevier.com/retrieve/pii/S2667325824000037	Oscillatory phase transition induced structural extension during iron oxide reduction
Ultrathin silicon nitride microchip for in situ/operando microscopy with high spatial resolution and spectral visibility	https://www.science.org/doi/10.1126/sciadv.adj6417	Ultrathin silicon nitride microchip for in situ/operando microscopy with high spatial resolution and spectral visibility
Synthesis of core@shell catalysts guided by Tammann temperature	https://www.nature.com/articles/s41467-024-44705-5	Synthesis of core@shell catalysts guided by Tammann temperature
Synthesis of uniform Fe ₂ O ₃ @Y ₂ O ₃ yolk-shell nanoreactors as chemical looping oxygen carriers	https://www.sciencedirect.com/science/article/pii/S0926337324002492	Synthesis of uniform Fe ₂ O ₃ @Y ₂ O ₃ yolk-shell nanoreactors as chemical looping oxygen carriers
Liquid metals for boosting stability of zeolite catalysts in the conversion of methanol to hydrocarbons	https://www.nature.com/articles/s41467-024-46232-9	Liquid metals for boosting stability of zeolite catalysts in the conversion of methanol to hydrocarbons