CORROSION

BIBLIOGRAPHY — JOURNAL ARTICLES

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TITLE	WEB LINK	CITATIONS
Direct in-situ imaging of electrochemical corrosion of Pd-Pt core-shell electrocatalysts	https://www.nature.com/articles/s41467-024-49434-3	Shi, Fenglei; Tieu, Peter; Hu, Hao; Peng, Jiaheng; Zhang, Wencong; Li, Fan; Tao, Peng; Song, Chengyi; Shang, Wen; Deng, Tao; Gao, Wenpei; Pan, Xiaoqing; Wu, Jianbo , Direct in-situ imaging of electrochemical corrosion of Pd-Pt core-shell electrocatalysts, 2024, Nature Communications, 10.1038/s41467-024-49434-3
Unraveling Anisotropic and Pulsating Etching of ZnO Nanorods in Hydrochloric Acid via Correlative Electron Microscopy	https://pubs.acs.org/doi/10.1021/acsnano.3c02940	Liu, Fangyuan; Lu, Xingxu; Zhu, Chunxiang; Bian, Zichao; Song, Xiaohui; Sun, Jiyu; Zhang, Bo; Weng, Junfei; Subramanian, Ashwanth; Tong, Xiao; Zhang, Lichun; Dongare, Avinash M.; Nam, Chang-Yong; Ding, Yong; Zheng, Guoan; Tan, Haiyan; Gao, Pu-Xian , Unraveling Anisotropic and Pulsating Etching of ZnO Nanorods in Hydrochloric Acid via Correlative Electron Microscopy, 2023, ACS Nano, 10.1021/acsnano.3c02940
Operando electrochemical TEM, ex-situ SEM and atomistic modeling studies of MnS dissolution and its role in triggering pitting corrosion in 304L stainless steel	https://linkinghub.elsevier.com/retrieve/pii/S0010938X22001020	Kovalov, Danyil; Taylor, Christopher D.; Heinrich, Helge; Kelly, Robert G. , Operando electrochemical TEM, ex-situ SEM and atomistic modeling studies of MnS dissolution and its role in triggering pitting corrosion in 304L stainless steel, 2022, Corrosion Science, 10.1016/j.corsci.2022.110184
Possible embryo and precursor of crystalline nuclei of calcium carbonate observed by LC-TEM	http://pubs.rsc.org/en/Content/ArticleLanding/2022/FD/D1FD00125F	Kimura, Yuki; Katsuno, Hiroyasu; Yamazaki, Tomoya , Possible embryo and precursor of crystalline nuclei of calcium carbonate observed by LC-TEM, 2022, Faraday Discussions, 10.1039/D1FD00125F
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	Li, Meirong; Mao, Chengliang; Ling, Lan , *In situ* Visualization on Surface Oxidative Corrosion with Free Radicals: Black Phosphorus Nanoflake as an Example, 2022, Environmental Science & Technology, 10.1021/acs.est.1c06567
Elucidating Cathodic Corrosion Mechanisms with Operando Electrochemical Transmission Electron Microscopy	https://pubs.acs.org/doi/10.1021/jacs.2c05989	Yang, Yao; Shao, Yu-Tsun; Lu, Xinyao; Yang, Yan; Ko, Hsin-Yu; Jr, Robert A DiStasio; DiSalvo, Francis J; Muller, David A; Abruña, Héctor D , Elucidating Cathodic Corrosion Mechanisms with Operando Electrochemical Transmission Electron Microscopy, 2022, Journal of the American Chemical Society, 10.1021/jacs.2c05989
Discovering the nanoscale origins of localized corrosion in additive manufactured stainless steel 316L by liquid cell transmission electron microscopy	https://www.sciencedirect.com/science/article/pii/S0010938X22005777	Tian, Mengkun; Choundraj, Jahnavi Desai; Voisin, Thomas; Wang, Y. Morris; Kacher, Josh , Discovering the nanoscale origins of localized corrosion in additive manufactured stainless steel 316L by liquid cell transmission electron microscopy, 2022, Corrosion Science, 10.1016/j.corsci.2022.110659
Galvanic Transformation Dynamics in Heterostructured Nanoparticles	https://onlinelibrary.wiley.com/doi/abs/10.1002/adfm.202105866	Du, Jingshan S.; He, Kun; Xu, Yaobin; Wahl, Carolin B.; Xu, David D.; Dravid, Vinayak P.; Mirkin, Chad A. , Galvanic Transformation Dynamics in Heterostructured Nanoparticles, 2021, Advanced Functional Materials, 10.1002/adfm.202105866
In situ Oxidation Studies of High-Entropy Alloy Nanoparticles	https://pubs.acs.org/doi/10.1021/acsnano.0c05250	Song, Boao; Yang, Yong; Rabbani, Muztoba; Yang, Timothy T.; He, Kun; Hu, Xiaobing; Yuan, Yifei; Ghildiyal, Pankaj; Dravid, Vinayak P.; Zachariah, Michael R.; Saidi, Wissam A.; Liu, Yuzi; Shahbazian-Yassar, Reza , *In situ* Oxidation Studies of High-Entropy Alloy Nanoparticles, 2020, ACS Nano, 10.1021/acsnano.0c05250
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	Unocic, Kinga A; Walden, Franklin S; Marthe, Nelson L; Datye, Abhaya K; Bigelow, Wilbur C; Allard, Lawrence F , Introducing and Controlling Water Vapor in Closed-Cell *In situ* Electron Microscopy Gas Reactions, 2020, Microscopy and Microanalysis, https://doi.org/10.1017/S1431927620000185
Investigating local oxidation processes in Fe thin films in a water vapor environment by *in situ* liquid cell TEM	http://www.sciencedirect.com/science/article/pii/S0304399119300750	Key, Jordan W.; Zhu, Shixiang; Rouleau, Christopher M.; Unocic, Raymond R.; Xie, Yao; Kacher, Josh , Investigating local oxidation processes in Fe thin films in a water vapor environment by *in situ* liquid cell TEM, 2020, Ultramicroscopy, 10.1016/j.ultramic.2019.112842
Selective shortening of gold nanorods: when surface functionalization dictates the reactivity of nanostructures	https://pubs.rsc.org/en/content/articlelanding/2020/nr/d0nr06326f	Khelfa, Abdelali; Meng, Jun; Byun, Caroline; Wang, Guillaume; Nelayah, Jaysen; Ricolleau, Christian; Amara, Hakim; Guesmi, Hazar; Alloyeau, Damien , Selective shortening of gold nanorods: when surface functionalization dictates the reactivity of nanostructures, 2020, Nanoscale, 10.1039/D0NR06326F
Strain-Induced Corrosion Kinetics at Nanoscale Are Revealed in Liquid: Enabling Control of Corrosion Dynamics of Electrocatalysis	http://www.sciencedirect.com/science/article/pii/S2451929420302539	Shi, Fenglei; Gao, Wenpei; Shan, Hao; Li, Fan; Xiong, Yalin; Peng, Jiaheng; Xiang, Qian; Chen, Wenlong; Tao, Peng; Song, Chengyi; Shang, Wen; Deng, Tao; Zhu, Hong; Zhang, Hui; Yang, Deren; Pan, Xiaoqing; Wu, Jianbo , Strain-Induced Corrosion Kinetics at Nanoscale Are Revealed in Liquid: Enabling Control of Corrosion Dynamics of Electrocatalysis, 2020, Chem, 10.1016/j.chempr.2020.06.004

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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	Harlow, Wayne; Taheri, Mitra L. , Toward 3D imaging of corrosion at the nanoscale: Cross-sectional analysis of in-situ oxidized TEM samples, 2019, Micron, 10.1016/j.micron.2019.02.008
Nanoscale kinetics of asymmetrical corrosion in core-shell nanoparticles	https://www.nature.com/articles/s41467-018-03372-z	Shan, Hao; Gao, Wenpei; Xiong, Yalin; Shi, Fenglei; Yan, Yucong; Ma, Yanling; Shang, Wen; Tao, Peng; Song, Chengyi; Deng, Tao; Zhang, Hui; Yang, Deren; Pan, Xiaoqing; Wu, Jianbo , Nanoscale kinetics of asymmetrical corrosion in core-shell nanoparticles, 2018, Nature Communications, 10.1038/s41467-018-03372-z
In situ TEM Observations of Corrosion in Nanocrystalline Fe Thin Films	https://onlinelibrary.wiley.com/doi/10.1002/9781119423829.ch29	Gross, David; Kacher, Josh; Key, Jordan; Hattar, Khalid; Robertson, Ian M. , *In situ* TEM Observations of Corrosion in Nanocrystalline Fe Thin Films, 2018, Ceramic Transactions Series, 10.1002/9781119423829.ch29
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	Burke, M. G.; Bertali, G.; Prestat, E.; Scenini, F.; Haigh, S. J. , The application of *in situ* analytical transmission electron microscopy to the study of preferential intergranular oxidation in Alloy 600, 2017, Ultramicroscopy, 10.1016/j.ultramic.2016.11.014
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	Unocic, Kinga A.; Shin, Dongwon; Unocic, Raymond R.; Allard, Lawrence F. , NiAl Oxidation Reaction Processes Studied *In situ* Using MEMS-Based Closed-Cell Gas Reaction Transmission Electron Microscopy, 2017, Oxidation of Metals, 10.1007/s11085-016-9676-2
Practical Aspects of Electrochemical Corrosion Measurements During *In situ* Analytical Transmission Electron Microscopy (TEM) of Austenitic Stainless Steel in Aqueous Media	https://www.cambridge.org/core/product/identifier/S1431927617012314/type/journal_article	Schilling, Sibylle; Janssen, Arne; Zaluzec, Nestor J.; Burke, M. Grace , Practical Aspects of Electrochemical Corrosion Measurements During *In situ* Analytical Transmission Electron Microscopy (TEM) of Austenitic Stainless Steel in Aqueous Media, 2017, Microscopy and Microanalysis, 10.1017/S1431927617012314
Determination of the initial oxidation behavior of Zircaloy-4 by in-situ TEM	http://www.sciencedirect.com/science/article/pii/S0022311516300824	Harlow, Wayne; Ghassemi, Hessam; Taheri, Mitra L. , Determination of the initial oxidation behavior of Zircaloy-4 by in-situ TEM, 2016, Journal of Nuclear Materials, 10.1016/j.jnucmat.2016.03.009
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	Zhong, Xiang Li; Schilling, Sibylle; Zaluzec, Nestor J.; Burke, M. Grace , Sample Preparation Methodologies for *In situ* Liquid and Gaseous Cell Analytical Transmission Electron Microscopy of Electropolished Specimens, 2016, Microscopy and Microanalysis, 10.1017/S1431927616011855
In situ environmental transmission electron microscopy study of oxidation of two-dimensional Ti3C2 and formation of carbon-supported TiO2	https://pubs.rsc.org/en/content/articlelanding/2014/ta/c4ta02583k	Ghassemi, H.; Harlow, W.; Mashtalir, O.; Beidaghi, M.; Lukatskaya, M. R.; Gogotsi, Y.; Taheri, M. L. , *In situ* environmental transmission electron microscopy study of oxidation of two-dimensional Ti3C2 and formation of carbon-supported TiO2, 2014, Journal of Materials Chemistry A, 10.1039/C4TA02583K
In situ TEM Ion Irradiation and Atmospheric Heating of Cladding Materials	https://link.springer.com/article/10.1557/opl.2012.186	Hattar, K.; Rajasekhara, S.; Clark, B. G. , *In situ*TEM Ion Irradiation and Atmospheric Heating of Cladding Materials, 2012, MRS Online Proceedings Library Archive, 10.1557/opl.2012.186