

List of publications: Dr. Walid Hetaba

2022

- Lin, S. H., **Hetaba, W.**, Chaudret, B., Leitner, W., & Bordet, A. (2022). Copper-Decorated Iron Carbide Nanoparticles Heated by Magnetic Induction as Adaptive Multifunctional Catalysts for the Selective Hydrodeoxygenation of Aldehydes. *Advanced Energy Materials*(12), 2201783. <https://doi.org/10.1002/aenm.202201783>

2021

- Gioria, E., Duarte-Correa, L., Bashiri, N., **Hetaba, W.**, Schomaecker, R., & Thomas, A. (2021). Rational design of tandem catalysts using a core-shell structure approach. *Nanoscale Advances*, 3(12), 3454-3459. <https://doi.org/10.1039/d1na00310k>
- **Hetaba, W.**, Imlau, R., Duarte-Correa, L., Lamothe, M., Kujawa, S., & Lunkenbein, T. (2021). ChemiTEM – Transmission Electron Microscopy Optimized for Chemistry and Material Science. *Chemistry–Methods*, 1(9), 401-407. <https://doi.org/10.1002/cmtd.202100001>
- Löffler, S., Stöger-Pollach, M., Steiger-Thirsfeld, A., **Hetaba, W.**, & Schattschneider, P. (2021). Exploiting the Acceleration Voltage Dependence of EMCD. *Materials*, 14(5), 1314. <https://doi.org/10.3390/ma14051314>

2020

- El Sayed, S., Bordet, A., Weidenthaler, C., **Hetaba, W.**, Luska, K. L., & Leitner, W. (2020). Selective Hydrogenation of Benzofurans Using Ruthenium Nanoparticles in Lewis Acid-Modified Ruthenium-Supported Ionic Liquid Phases. *Acs Catalysis*, 10(3), 2124-2130. <https://doi.org/10.1021/acscatal.9b05124>
- **Hetaba, W.**, Klyushin, A. Y., Falling, L. J., Shin, D., Mechler, A. K., Willinger, M. G., & Schlögl, R. (2020). Investigation of Electrocatalysts Produced by a Novel Thermal Spray Deposition Method. *Materials*, 13(12), 25. <https://doi.org/10.3390/ma13122746>
- Koch, G., Hävecker, M., Teschner, D., Carey, S. J., Wang, Y. Q., Kube, P., **Hetaba, W.**, Lunkenbein, T., Auffermann, G., Timpe, O., Rosowski, F., Schlögl, R., & Trunschke, A. (2020). Surface Conditions That Constrain Alkane Oxidation on Perovskites. *Acs Catalysis*, 10(13), 7007-7020. <https://doi.org/10.1021/acscatal.0c01289>
- Masliuk, L., Schmidt, F. P., **Hetaba, W.**, Plodinec, M., Auffermann, G., Hermann, K., Teschner, D., Girgsdies, F., Trunschke, A., Schlögl, R., & Lunkenbein, T. (2020). Compositional Decoupling of Bulk and Surface in Open-Structured Complex Mixed Oxides. *Journal of Physical Chemistry C*, 124(42), 23069-23077. <https://doi.org/10.1021/acs.jpcc.0c04777>
- Wolf, E. H., Millet, M.-M., Seitz, F., Redeker, F. A., Riedel, W., Scholz, G., **Hetaba, W.**, Teschner, D., Wrabetz, S., Girgsdies, F., Klyushin, A., Risse, T., Riedel, S., & Frei, E. (2020). F-doping of nanostructured ZnO: a way to modify structural, electronic, and surface properties. *Physical Chemistry Chemical Physics*, 22(20), 11273-11285. <https://doi.org/10.1039/d0cp00545b>

2019

- Häusler, I., Kamachali, R. D., **Hetaba, W.**, & Skrotzki, B. (2019). Thickening of T-1 Precipitates during Aging of a High Purity Al-4Cu-1Li-0.25Mn Alloy. *Materials*, 12(1), 23. <https://doi.org/10.3390/ma12010030>

2018

- Löffler, S., & **Hetaba, W.** (2018). Convergent-beam EMCD: benefits, pitfalls and applications. *Microscopy*, 67(suppl_1), i60-i71. <https://doi.org/10.1093/jmicro/dfx129>
- Straten, J. W., Schleker, P., Krasowska, M., Veroutis, E., Granwehr, J., Auer, A. A., **Hetaba, W.**, Becker, S., Schlögl, R., & Heumann, S. (2018). Nitrogen-Functionalized Hydrothermal Carbon Materials by Using Urotropine as the Nitrogen Precursor. *Chemistry-a European Journal*, 24(47), 12298-12317. <https://doi.org/10.1002/chem.201800341>

2017

- Anke, B., Rohloff, M., Willinger, M. G., **Hetaba, W.**, Fischer, A., & Lerch, M. (2017). Improved photoelectrochemical performance of bismuth vanadate by partial O/F-substitution. *Solid State Sciences*, 63, 1-8. <https://doi.org/10.1016/j.solidstatesciences.2016.11.004>
- Häusler, I., Schwarze, C., Bilal, M. U., Ramirez, D. V., **Hetaba, W.**, Kamachali, R. D., & Skrotzki, B. (2017). Precipitation of T-1 and theta' Phase in Al-4Cu-1Li-0.25Mn During Age Hardening: Microstructural Investigation and Phase-Field Simulation. *Materials*, 10(2), 21. <https://doi.org/10.3390/ma10020117>
- Rudi, S., Teschner, D., Beermann, V., **Hetaba, W.**, Gan, L., Cui, C. H., Glied, M., Schlögl, R., & Strasser, P. (2017). pH-Induced versus Oxygen-Induced Surface Enrichment and Segregation Effects in Pt-Ni Alloy Nanoparticle Fuel Cell Catalysts. *Acs Catalysis*, 7(9), 6376-6384. <https://doi.org/10.1021/acscatal.7b00996>

2016

- **Hetaba, W.**, & Stöger-Pollach, M. (2016). EMCD investigation of the Verwey-transition in magnetite. In *European Microscopy Congress 2016: Proceedings* (pp. 1086-1087).
- Thalinger, R., Götsch, T., Zhuo, C., **Hetaba, W.**, Wallisch, W., Stöger-Pollach, M., Schmidmair, D., Klötzer, B., & Penner, S. (2016). Rhodium-Catalyzed Methanation and Methane Steam Reforming Reactions on Rhodium-Perovskite Systems: Metal-Support Interaction. *Chemcatchem*, 8(12), 2057-2067. <https://doi.org/10.1002/cctc.201600262>

2015

- **Hetaba, W.** (2015). Die Transmissionselektronenmikroskopie an der TU Wien / Transmission Electron Microscopy at the TU Wien. In G. Badurek (Ed.), *Die Fakultät für Physik* (Vol. 9, pp. 119-122). Wien, Köln, Weimar: Böhlau.
- Navickas, E., Huber, T. M., Chen, Y., **Hetaba, W.**, Holzlechner, G., Rupp, G., Stöger-Pollach, M., Friedbacher, G., Hutter, H., Yildiz, B., & Fleig, J. (2015). Fast oxygen exchange and diffusion kinetics of grain boundaries in Sr-doped LaMnO₃ thin films. *Physical Chemistry Chemical Physics*, 17(12), 7659-7669. <https://doi.org/10.1039/c4cp05421k>
- Rogge, J., **Hetaba, W.**, Schmalhorst, J., Bouchikhaoui, H., Stender, P., Baither, D., Schmitz, G., & Hütten, A. (2015). Co₂FeAl based magnetic tunnel junctions with BaO and MgO/BaO barriers. *Aip Advances*, 5(7), 7. <https://doi.org/10.1063/1.4927638>
- Teichert, N., Kucza, D., Yildirim, O., **Hetaba, W.**, Behler, A., Yüzüak, E., Dincer, I., Helmich, L., Boehnke, A., Stöger-Pollach, M., Steiger-Thirsfeld, A., Waske, A., Schattschneider, P., Elerman, Y., & Hütten, A. (2015). *Structure and Giant Inverse Magnetocaloric Effect of Epitaxial Ni-Co-Mn-Al Films*. Paper presented at the 2015 IEEE Magnetics Conference (INTERMAG), New York.

2014

- **Hetaba, W.**, Löffler, S., Willinger, M. G., Schuster, M. E., Schlögl, R., & Schattschneider, P. (2014). Site-specific ionisation edge fine-structure of Rutile in the electron microscope. *Micron*, 63, 15-19. <https://doi.org/10.1016/j.micron.2014.02.008>
- Huber, T., Bergmair, B., Vogler, C., Bruckner, F., Breth, L., **Hetaba, W.**, Hrkac, G., & Süß, D. (2014). Ultra-Low-Cost RFID Based on Soft Magnetic Ribbons. *Ieee Transactions on Magnetics*, 50(10), 5. <https://doi.org/10.1109/tmag.2014.2327200>
- Kogler, M., Köck, E. M., Perfler, L., Bielz, T., Stöger-Pollach, M., **Hetaba, W.**, Willinger, M., Huang, X., Schuster, M., Klötzer, B., & Penner, S. (2014). Methane Decomposition and Carbon Growth on Y₂O₃, Ytria-Stabilized Zirconia, and ZrO₂. *Chemistry of Materials*, 26(4), 1690-1701. <https://doi.org/10.1021/cm404062r>
- Meinert, M., Geisler, M. P., Schmalhorst, J., Heinzmann, U., Arenholz, E., **Hetaba, W.**, Stöger-Pollach, M., Hütten, A., & Reiss, G. (2014). Experimental realization of a semiconducting full-Heusler compound: Fe₂TiSi. *Physical Review B*, 90(8), 5. <https://doi.org/10.1103/PhysRevB.90.085127>
- Wolff, A., **Hetaba, W.**, Wissbrock, M., Löffler, S., Mill, N., Eckstädt, K., Dreyer, A., Ennen, I., Sewald, N., Schattschneider, P., & Hütten, A. (2014). Oriented attachment explains cobalt ferrite nanoparticle growth in bioinspired syntheses. *Beilstein Journal of Nanotechnology*, 5, 210-218. <https://doi.org/10.3762/bjnano.5.23>

2013

- **Hetaba, W.** (2013). Die physikalische Forschung an der Technischen Hochschule in Wien 1938-1945 im Spiegel der Dissertationen. In Ö. HochschülerInnenschaft (Ed.), *Österreichische Hochschulen im 20. Jahrhundert. Austrofaschismus, Nationalsozialismus und die Folgen* (pp. 263-274). Wien: Facultas.wuv.
- Thalinger, R., Stöger-Pollach, M., **Hetaba, W.**, Feuerbacher, M., Klötzer, B., & Penner, S. (2013). Electron microscopy investigations of metal-support interaction effects in M/Y₂O₃ and M/ZrO₂ thin films (M=Cu, Ni). *Materials Chemistry and Physics*, 143(1), 167-177. <https://doi.org/10.1016/j.matchemphys.2013.08.048>

2012

- **Hetaba, W.**, Blaha, P., Tran, F., & Schattschneider, P. (2012). Calculating energy loss spectra of NiO: Advantages of the modified Becke-Johnson potential. *Physical Review B*, 85(20), 6. <https://doi.org/10.1103/PhysRevB.85.205108>
- Wolff, A., Frese, K., Wissbrock, M., Eckstädt, K., Ennen, I., **Hetaba, W.**, Löffler, S., Regtmeier, A., Thomas, P., Sewald, N., Schattschneider, P., & Hütten, A. (2012). Influence of the synthetic polypeptide c25-mms6 on cobalt ferrite nanoparticle formation. *Journal of Nanoparticle Research*, 14(10), 11. <https://doi.org/10.1007/s11051-012-1161-5>

2010

- **Hetaba, W.**, Mogilatenko, A., & Neumann, W. (2010). Electron beam-induced oxygen desorption in gamma-LiAlO₂. *Micron*, 41(5), 479-483. <https://doi.org/10.1016/j.micron.2010.03.004>
- Neumann, W., Kirmse, H., Häusler, I., Mogilatenko, A., Zheng, C., & **Hetaba, W.** (2010). Advanced microstructure diagnostics and interface analysis of modern materials by high-resolution analytical transmission electron microscopy. *Bulletin of the Polish Academy of Sciences-Technical Sciences*, 58(2), 237-253. <https://doi.org/10.2478/v10175-010-0023-5>