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Research output list of the last five years (2017-2021)

Publications in international peer-reviewed scientific journals

2021

1. **Imaging of retina cellular and subcellular structures using ptychographic hard X-ray tomography**
Valérie Panneels, Ana Diaz, Cornelia Imsand, Manuel Guizar-Sicairos, Elisabeth Müller, Anne Greet Bitterman, Takashi Ishikawa, Andreas Menzel, Andres Kaech, Mirko Holler, Christian Grimm, Gebhard Schertler
J. Cell Science 134 (2021)
2. **Correlation between Oxygen Vacancies and Oxygen Evolution Reaction Activity for a Model Electrode: PrBaCo₂O_{5+δ}**
Elena Marelli, Jaume Gazquez, Emiliya Poghosyan, Elisabeth Müller, Dariusz J. Gawryluk, Ekaterina Pomjakushina, Denis Sheptyakov, Cinthia Piamonteze, Dino Aegerter, Thomas J. Schmidt, Marisa Medarde, and Emiliania Fabbri
Angew. Chem. Int. Ed. 60 (2021) 14609–14619
3. **Pt catalytic effects on the corrosion and hydrogen chemisorption properties of Zircaloy-2**
Sriharitha Rowthu, Pascal V. Grundler, Elisabeth Müller, Stefan Ritter
J. Nuclear Materials 544 (2021) 152716

2019

4. **Design guidelines for an electron diffractometer for structural chemistry and structural biology**
Jonas Heidler, Radosav Pantelic, Julian T. C. Wennmacher, Christian Zaubitzer, Ariane Fecteau-Lefebvre, Kenneth N. Goldie, Elisabeth Müller, Julian J. Holstein, Eric van Genderen, Sacha De Carlo and Tim Gruene
Acta Cryst. D75 (2019) 458–466
5. **Three-dimensional imaging of integrated circuits with macro- to nanoscale zoom**
Mirko Holler, Michal Odstrcil, Manuel Guizar-Sicairos, Maxime Lebugle, Elisabeth Müller, Simone Finizio, Gemma Tinti, Christian David, Joshua Zusman, Walter Unglaub, Oliver Bunk, Jörg Raabe, A. F. J. Levi and Gabriel Aeppli
Nature Electronics 464 (2019) 464–470

6. **Ferroelectric Self-Poling in GeTe Films and Crystals**
Dominik Kriegner, Gunther Springholz, Carsten Richter, Nicolas Pilet, Elisabeth Müller, Marie Capron, Helmut Berger, Václav Holý and J. Hugo Dil and Juraj Krempaský
Crystals 9 (2019) 335

2018

7. **Multiferroic phase diagram of *E*-type RMnO₃ films studied by neutron and x-ray diffraction**
Saumya Mukherjee, Kenta Shimamoto, Yoav William Windsor, Mahesh Ramakrishnan, Sergii Parchenko, Urs Staub, Laurent Chapon, Bachir Ouladdiaf, Marisa Medarde, Tian Shang, Elisabeth A. Müller, Michel Kenzelmann, Thomas Lippert, Christof W. Schneider, and Christof Niedermayer
Physical Review B 98 (2018) 174416
8. **Formation and transformation of calcium phosphate phases under biologically relevant conditions: Experiments and modelling**
Agnese Carino, Christian Ludwig, Antonio Cervellino, Elisabeth Müller, Andrea Testino
Acta Biomaterialia 74 (2018) 478–488
9. **Combustion generated nanomaterials: online characterization via an ICP-MS based technique. Part II: resolving power for heterogeneous matrices**
D. Foppiano, M. Tarik, E. Gubler Müller and C. Ludwig
J. Anal. At. Spectrom. 33 (2018) 1500–1505
10. **Emissions of Secondary Formed ZnO Nano-Objects from the Combustion of Impregnated Wood. An Online Size-Resolved Elemental Investigation**
Debora Foppiano, Mohamed Tarik, Elisabeth Müller Gubler, and Christian Ludwig
Environ. Sci. Technol. 2018, 52, 895–903
11. **Rapid Structure Determination of Microcrystalline Molecular Compounds Using Electron Diffraction**
Tim Gruene, Julian T. C. Wennmacher, Christan Zaubitzer, Julian J. Holstein, Jonas Heidler, Ariane Fecteau-Lefebvre, Sacha De Carlo, Elisabeth Müller, Kenneth N. Goldie, Irene Regeni, Teng Li, Gustavo Santiso-Quinones, Gunther Steinfeld, Stephan Handschin, Eric van Genderen, Jeroen A. van Bokhoven, Guido H. Clever, and Radosav Pantelic
Angew. Chem. Int. Ed. 57 (2018) 16313 –16317
12. **High-resolution, Non-destructive X-ray Tomography**
Mirko Holler, Manuel Guizar-Sicairos, Esther H. R. Tsai, Michal Odstrcil, Roberto Dinapoli, Elisabeth Müller, Ana Diaz, Oliver Bunk, Jörg Raab, and Gabriel Aeppli
CHIMIA 72 (2018) 339
13. **Resonant Ptychographic Tomography Facilitates Three-Dimensional Quantitative Colocalization of Catalyst Components and Chemical Elements**
Johannes Ihli, Ana Diaz, Yuying Shu, Manuel Guizar-Sicairos, Mirko Holler, Klaus Wakonig, Michal Odstrcil, Teng Li, Frank Krumeich, Elisabeth Müller, Wu-Cheng Cheng, Jeroen Anton van Bokhoven, and Andreas Menzel
J. Phys. Chem. C 122 (2018) 22920–22929

14. **Operando Imaging of All-Electric Spin Texture Manipulation in Ferroelectric and Multiferroic Rashba Semiconductors**
J. Krempaský, S. Muff, J. Minár, N. Pilet, M. Fanciulli, A. P. Weber, E. B. Guedes, M. Caputo, E. Müller, V. V. Volobuev, M. Gmitra, C. A. F. Vaz, V. Scagnoli, G. Springholz, and J. H. Dil
Phys. Rev. X 8 (2018) 021067
15. **Multiferroic phase diagram of *E*-type RMnO₃ films studied by neutron and x-ray diffraction**
Saumya Mukherjee, Kenta Shimamoto, Yoav William Windsor, Mahesh Ramakrishnan, Sergii Parchenko, Urs Staub, Laurent Chapon, Bachir Ouladdiaf, Marisa Medarde, Tian Shang, Elisabeth A. Müller, Michel Kenzelmann, Thomas Lippert, Christof W. Schneider, and Christof Niedermayer
Phys.Rev. B 98 (2018) 174416
16. **Toward high-performance Li(Ni_xCo_yMn_z)O₂ cathodes: facile fabrication of an artificial polymeric interphase using functional polyacrylates**
Bing Sun, Mario El Kazzi, Elisabeth Müller and Erik J. Berg
J. Mater. Chem. A 6 (2018) 17778–17786

2017

17. **High-resolution non-destructive three-dimensional imaging of integrated circuits**
M. Holler, M. Guizar-Sicairos, E.H.R. Tsai, R. Dinapoli, E. Müller, O. Bunk, J. Raabe, and G. Aeppli
Nature 543 (2017) 401-407
18. **Unsupported Pt-Ni Aerogels with Enhanced High Current Performance and Durability in Fuel Cell Cathodes**
Sebastian Henning, Hiroshi Ishikawa, Laura Kühn, Juan Herranz, Elisabeth Müller, Alexander Eychmüller, and Thomas J. Schmidt
Angew. Chem. Int. Ed. 56 (2017) 10707 –10710
19. **Top-down method to introduce ultra-high elastic strain**
Thomas Zabel, Richard Geiger, Esteban Marin, Elisabeth Müller, Ana Diaz, Christopher Bonzon, Martin J. Süess, Ralph Spolenak, Jérôme Faist, Hans Sigg
J. Mater. Res., 32 (2017) 726 – 736