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## Laboratory for Joining Technologies & Corrosion

### Publications 2019

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- H.R. Elsener, B. Rheingans, L.P.H. Jeurgens, T. Burgdorf, S. Brüngger, D. Piazza, P. Wurz, *Brazed metal-ceramic components for space applications*, **LÖT 2019 DVS Berichte** Band 353 (2019) 207-214 [[Source](#)].
- R. Wick-Joliat, T. Musso, R. Ramanujam Prabhakar, J. Löckinger, S. Sioj, W. Cui, L. Sévery, T. Moehl, J. Suh, J. Hutter, M. Iannuzzi, S.D. Tilley, *Stable and tunable phosphonic acid dipole layer for band edge engineering of photoelectrochemical and photovoltaic heterojunction devices*, **Energy & Environmental Science** (2019) [DOI: [10.1039/C9EE00748B](https://doi.org/10.1039/C9EE00748B)].
- B. Ozdirik, T. Suter, U. Hans, T. Depover, K. Verbeken, P. Schmutz, L.P.H. Jeurgens, H. Terryn, I. De Graeve, *Study of the hydrogen uptake in deformed steel using the microcapillary cell technique*, **Corrosion Science** 155 (2019) 55-66 [DOI: [10.1016/j.corsci.2019.04.029](https://doi.org/10.1016/j.corsci.2019.04.029)].
- T. Gagnidze, H. Ma, C. Cancellieri, G.-L. Bona, F. La Mattina, *Structural properties of ultrathin SrO film deposited on SrTiO<sub>3</sub>*, **Science and Technology of Advanced Materials** Vol. 20 No. 1 (2019) 456-463 [DOI: [10.1080/14686996.2019.1599693](https://doi.org/10.1080/14686996.2019.1599693)].
- E. Ilic, A. Pardo, R. Hauert, P. Schmutz, S. Mischler, *Silicon Corrosion in Neutral Media: The Influence of Confined Geometries and Crevice Corrosion in Simulated Physiological Solutions*, **Journal of The Electrochemical Society** 166 (2019) 125-133 [DOI: [10.1149/2.0241906jes](https://doi.org/10.1149/2.0241906jes)].
- S.Sioj, *Assessing Metastability in Heterostructural Semiconductor Alloys*, **Physica Status Solidi A** (2019) 1800858 [DOI: [10.1002/pssa.201800858](https://doi.org/10.1002/pssa.201800858)].
- S. Sioj, C. Beall, N. Ott, M. Döbeli, M. González-Castanõ, R. Wick-Joliat, S. David Tilley, Lars P.H. Jeurgens, P. Schmutz, C. Cancellieri, *Anodizing of Self-Passivating W<sub>x</sub>Ti<sub>1-x</sub>Precursors for W<sub>x</sub>Ti<sub>1-x</sub>O<sub>n</sub> Oxide Alloys with Tailored Stability*, **ACS Applied Materials Interfaces** 11 (2019) 9510-9518 [DOI: [10.1021/acsami.8b19170](https://doi.org/10.1021/acsami.8b19170)].
- Z. Chen, S. Mitchell, F. Krumeich, R. Hauert, S. Yakunin, M.V. Kovalenko, J. Pérez-Ramírez, *Tunability and Scalability of Single-Atom Catalysts Based on Carbon Nitride*, **ACS Sustainable Chemistry & Engineering** 7 (2019) 5223-5230 [DOI: [10.1021/acssuschemeng.8b06148](https://doi.org/10.1021/acssuschemeng.8b06148)].
- A. Pardo, E. Ilic, K. Thorwarth, M. Stiefel, R. Hauert, *Corrosion fatigue in DLC-coated articulating implants: an accelerated methodology to predict realistic interface lifetime*, **Science and Technology of Advanced Materials** 20 (2019) 173-186 [DOI: [10.1080/14686996.2019.1580483](https://doi.org/10.1080/14686996.2019.1580483)].
- V. Araullo-Peters, C. Cancellieri, M. Chiodi, J. Janczak-Rusch, L.P.H. Jeurgens, *Tailoring Fast Directional Mass Transport of Nano-Confined Ag-Cu Alloys upon Heating: Effect of the AlN Barrier Thickness*, **ACS Applied Materials & Interfaces** 11 (2019) 6605-6614 [DOI: [10.1021/acsami.8b19091](https://doi.org/10.1021/acsami.8b19091)].
- B. Rheingans, I. Spies, A. Schumacher, S. Knappmann, R. Furrer, L.P.H. Jeurgens, J. Janczak-Rusch, *Joining with Reactive Nano-Multilayers: Influence of Thermal Properties of Components on Joint Microstructure and Mechanical Performance*, **Applied Sciences** 9 (2019) 262 [DOI: [10.3390/app9020262](https://doi.org/10.3390/app9020262)].
- S.K. Kaiser, R. Lin, S. Mitchell, E. Fako, F. Krumeich, R. Hauert, O.V. Safonova, V.A. Kondratenko, E.V. Kondratenko, S.M. Collins, P.A. Midgley, N. López, J. Pérez-Ramírez, *Controlling the speciation and reactivity of carbon supported gold nanostructures for catalysed acetylene hydrochlorination*, **Chemical Science** 10 (2019) 359 [DOI: [10.1039/c8sc03186j](https://doi.org/10.1039/c8sc03186j)].
- L. Huber, S. B. Hauser, E. Brendlé, P. Ruch, J. Ammann, R. Hauert, R. N. Widmer, C.J. Ubert, S.K. Matam, S. Yoon, Y. Zhang, M.M. Koebel, *The effect of activation time on water sorption behavior of nitrogen-doped, physically activated, monolithic carbon for adsorption cooling*, **Microporous and Mesoporous Materials** 276 (2019) 239-250 [DOI: [10.1016/j.micromeso.2018.09.025](https://doi.org/10.1016/j.micromeso.2018.09.025)].