

as of September 21, 2018

Functional Materials related papers

(other than sensor papers, ceramic microsystems related papers, and aerosol deposition papers)

S. Bresch, B. Mieller, C. Selleng, T. Stöcker, R. Moos, T. Rabe:

Influence of the calcination procedure on the thermoelectric properties of calcium cobaltite $\text{Ca}_3\text{Co}_4\text{O}_9$

Journal of Electroceramics, **40**, 225-234 (2018), doi: [10.1007/s10832-018-0124-3](https://doi.org/10.1007/s10832-018-0124-3)

A. Engelbrecht, C. Uhlig, O. Stark, M. Hämmerle, G. Schmid, E. Magori, K. Wiesner-Fleischer, M. Fleischer, R. Moos:

On the Electrochemical CO_2 Reduction at Copper Sheet Electrodes with Enhanced Long-Term Stability by Pulsed Electrolysis

open access - free *Journal of the Electrochemical Society*, **165**, J3059-J3068 (2018), doi: [10.1149/2.0091815jes](https://doi.org/10.1149/2.0091815jes)

O. Isakin, S. Hiltl, O. Struck, M. Willert-Porada, R. Moos:

High-Yield Preparation of ZnO Nanoparticles on Exfoliated Graphite as Anode Material for Lithium Ion Batteries and the Effect of Particle Size as well as of Conductivity on the Electrochemical Performance of Such Composites

open access - free *Batteries*, **4**, 24 (2018), doi: [10.3390/batteries4020024](https://doi.org/10.3390/batteries4020024)

U. Schadeck, K. Kyrgyzbaev, H. Zettl, T. Gerdes, R. Moos:

Flexible, Heat-Resistant, and Flame-Retardant Glass Fiber Nonwoven/Glass Platelet Composite Separator for Lithium-Ion Batteries

open access - free *Energies*, **11**, 999 (2018), doi: [10.3390/en11040999](https://doi.org/10.3390/en11040999)

T. Michlik, M. Schmid, A. Rosin, T. Gerdes, R. Moos:

Mechanical Coating of Zinc Particles with $\text{Bi}_2\text{O}_3\text{-Li}_2\text{O-ZnO}$ Glasses as Anode Material for Rechargeable Zinc-Based Batteries

open access - free *Batteries*, **4**, 12 (2018), doi: [10.3390/batteries4010012](https://doi.org/10.3390/batteries4010012)

O. Isakin, S. Hiltl, R. Schneider, J. Bleisteiner, O. Struck, K. Schindler, M. Willert-Porada, R. Moos:

Ultrasound-assisted one-pot syntheses of ZnO nanoparticles that are homogeneously adsorbed on exfoliated graphite and a simplified method to determine the graphite layer thickness in such composites

Journal of Materials Science, **53**, 6586-6601 (2018), doi: [10.1007/s10853-018-2023-z](https://doi.org/10.1007/s10853-018-2023-z)

U. Schadeck, K. Kyrgyzbaev, T. Gerdes, M. Willert-Porada, R. Moos:

Porous and non-porous micrometer-sized glass platelets as separators for lithium-ion batteries

Journal of Membrane Science, **550**, 518-525 (2018), doi: [10.1016/j.memsci.2017.10.061](https://doi.org/10.1016/j.memsci.2017.10.061)

M. Bektas, T. Stöcker, G. Hagen, R. Moos:

On the defect chemistry of $\text{BaFe}_{0.89}\text{Al}_{0.01}\text{Ta}_{0.1}\text{O}_{3-\delta}$, a material for temperature independent resistive and thermoelectric oxygen sensors

Solid State Ionics, **316**, 1-8 (2018), doi: [10.1016/j.ssi.2017.12.017](https://doi.org/10.1016/j.ssi.2017.12.017)

M. Daab, P. Loch, W. Milius, D. Schönauer-Kamin, M. Schubert, A. Wunder, R. Moos, F.E Wagner, J. Brey:

Single-Crystal Structure and Electronic Conductivity of Melt Synthesized Fe-rich, near End-Member Ferro-Kinoshitalite

Zeitschrift für anorganische und allgemeine Chemie, **643**, 1661-1667, (2017) doi: [10.1002/zaac.201700265](https://doi.org/10.1002/zaac.201700265)

O. Isakin, R. Schneider, M. Ringl, O. Struck, T. Gerdes, M. Willert-Porada, R. Moos:

High-yield synthesis of ZnO nanoparticles homogeneously coated on exfoliated graphite and simplified method to determine the surface coverage

Surface and Coatings Technology, **325**, 445-453 (2017), doi: [10.1016/j.surfcoat.2017.07.002](https://doi.org/10.1016/j.surfcoat.2017.07.002)

S. Kauffmann-Weiss, W. Hässler, E. Guenther, J. Scheiter, S. Denneker, P. Glosse, T. Berthold, M. Oomen, T. Arndt, T. Stöcker, D. Hanft, R. Moos, M. Weiss, F. Weis, B. Holzapfel:

Superconducting properties of thick films on Hastelloy prepared by the Aerosol Deposition Method with ex-situ MgB_2 powder

IEEE Transactions on Applied Superconductivity, **27**, 6200904 (2017), doi: [10.1109/TASC.2017.2669479](https://doi.org/10.1109/TASC.2017.2669479)

A. Engelbrecht, M. Hämmerle, R. Moos, M. Fleischer, G. Schmid:

Improvement of the selectivity of the electrochemical conversion of CO_2 to hydrocarbons using cupreous electrodes with in-situ oxidation by oxygen

Electrochimica Acta, **224**, 642-648 (2017), doi: [10.1016/j.electacta.2016.12.059](https://doi.org/10.1016/j.electacta.2016.12.059)

F. Panzer, S. Baderschneider, T. Gujar, T. Unger, S. Bagnich, H. Bässler, M. Jakoby, S. Hüttner, J. Köhler, R. Moos, M. Thelakkat, R. Hildner, A. Köhler:

Reversible Laser Induced Amplified Spontaneous Emission from Coexisting Tetragonal and Orthorhombic Phases in Hybrid Lead Halide Perovskites

Advanced Optical Materials, **4**, 917-928 (2016), doi: [10.1002/adom.201500765](https://doi.org/10.1002/adom.201500765)

F. Panzer, D. Hanft, T.P. Gujar, F.-J. Kahle, M. Thelakkat, A. Köhler, R. Moos:

Compact Layers of Hybrid Halide Perovskites Fabricated via the Aerosol Deposition Process – Uncoupling Material Synthesis and Layer Formation

Materials, **9**, 277 (2016), doi: [10.3390/ma9040277](https://doi.org/10.3390/ma9040277)

T. Stöcker, J. Exner, M. Schubert, M. Streibl, R. Moos:

Influence of Oxygen Partial Pressure during Processing on the Thermoelectric Properties of Aerosol-Deposited CuFeO_2

Materials, **9**, 227 (2016), doi: [10.3390/ma9040227](https://doi.org/10.3390/ma9040227)

F. Schubert, S. Wollenhaupt, J. Kita, G. Hagen, R. Moos:

Platform to develop exhaust gas sensors manufactured by glass-solder-supported joining of sintered yttria-stabilized zirconia

Journal of Sensors and Sensor Systems, **5**, 25-32 (2016), doi: [10.5194/jsss-5-25-2016](https://doi.org/10.5194/jsss-5-25-2016)

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Failure of electrical vias manufactured in thick-film technology when loaded with short high current pulses
Microelectronics Reliability, **56**, 121-128 (2016), doi: 10.1016/j.microrel.2015.10.011

I. Pricha, W. Rossner, R. Moos:

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Journal of the American Ceramic Society, **99**, 211-217 (2016), doi: 10.1111/jace.13948

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An Overview of the Aerosol Deposition Method: Process Fundamentals and New Trends in Materials Applications
Journal of Ceramic Science and Technology, **6**, 147-182 (2015), doi: 10.4416/JCST2015-00018

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Advanced Powder Technology, **26**, 1143-1151 (2015), doi: 10.1016/j.apt.2015.05.016

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Journal of Ceramic Science and Technology, **6**, 63-68 (2015), doi: 10.4416/JCST2014-00047

J. Kita, A. Engelbrecht, F. Schubert, A. Groß, F. Rettig, R. Moos:

Some practical points to consider with respect to thermal conductivity and electrical resistivity of ceramic substrates for high-temperature gas sensors
Sensors and Actuators B: Chemical, **213**, 541-546 (2015), doi: 10.1016/j.snb.2015.01.041

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Journal of Ceramic Science and Technology, **6**, 63-68 (2015), doi: 10.4416/JCST2014-00047

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Influence of Carrier Gas Composition on the Stress of Al₂O₃ Coatings Prepared by the Aerosol Deposition Method
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J.C. Brendel, M.M. Schmidt, G. Hagen, R. Moos, M. Thelakkat:

Controlled Synthesis of Water-Soluble Conjugated Polyelectrolytes Leading to Excellent Hole Transport Mobility
Chemistry of Materials, **26**, 1992-1998 (2014), doi: 10.1021/cm500500t

B. Plochmann, S. Lang, R. Rüger, R. Moos:

Optimization of thermoelectric properties of metal-oxide based polymer composites
Journal of Applied Polymer Science, **131**, 40038 (2014), doi: 10.1002/app.40038

D. Chen, A. Groß, D.C. Bono, J. Kita, R. Moos, H.L. Tuller:

Electrical conductivity relaxation measurements: Application of low thermal mass heater stick
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Anisotropy and thermal stability of hot-forged BICUTIVOX oxygen ion conducting ceramics
Journal of the European Ceramic Society, **34**, 943-951 (2014), doi: 10.1016/j.jeurceramsoc.2013.10.016

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Sensors and Actuators B: Chemical, **187**, 174-183 (2013), doi: 10.1016/j.snb.2012.10.068

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Sensors and Actuators B: Chemical, **187**, 461-470 (2013), doi: 10.1016/j.snb.2013.01.083

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Defect chemistry and thermoelectric properties of doped Delafossite-type oxide CuFeO₂
2nd International Conference on Materials for Energy, EnMat II, Karlsruhe, Germany, May 12-16, 2013, 1.02-04

S. Fischer, R. Pohle, E. Magori, D. Schönauer-Kamin, M. Fleischer, R. Moos:

Pulsed Polarization of Platinum Electrodes on YSZ
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Influence of sintering conditions on doped PZT ceramics for base-metal electrode multilayer actuators
Functional Materials Letters, **5**, 1250022 (2012), doi: 10.1142/S1793604712500221

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K. Sahner, M. Kaspar, R. Moos:

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Sensors and Actuators B: Chemical, **139**, 394-399 (2009), doi: 10.1016/j.snb.2009.03.011

T. Richter, C. Schuh, E. Suvaci, R. Moos:

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Journal of Materials Science, **44**, 1757-1763 (2009), doi: 10.1007/s10853-009-3286-1

R. Moos:

Kap. 2.5 Elektrische Eigenschaften.

In W. Kollenberg (Hrsg.): Technische Keramik, Vulkan-Verlag GmbH, Essen (2009), 121-135, 2. Auflage, ISBN 978-3-8027-2953-9

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Kap. 5.3 Anwendungen keramischer Werkstoffe in der Technik: Elektronik.

In W. Kollenberg (Hrsg.): Technische Keramik, Vulkan-Verlag GmbH, Essen (2009), 605-609, 2. Auflage, ISBN 978-3-8027-2953-9

A.S. Kumar, P. Suresh, M.M. Kumar, M.L. Post, K. Sahner, R. Moos, S. Srinath:

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