

as of March 23, 2017

## Functional Materials related papers (other than sensor and ceramic microsystems related papers)

S. Kauffmann-Weiss, W. Hässler, E. Guenther, J. Scheiter, S. Denneler, 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

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

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

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

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

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

D. Ortolino, J. Kita, K. Beart, R. Wurm, S. Kleinewig, A. Pletsch, R. Moos:

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:

Layered Ceramic Phosphors Based on  $CaAlSiN_3:Eu$  and  $YAG:Ce$  for White Light-Emitting Diodes  
*Journal of the American Ceramic Society*, **99**, 211–217 (2016), doi: 10.1111/jace.13948

D. Hanft, J. Exner, M. Schubert, T. Stöcker, P. Fuierer, R. Moos:

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

J. Exner, M. Hahn, M. Schubert, D. Hanft, P. Fuierer, R. Moos:

Powder requirements for aerosol deposition of alumina films  
*Advanced Powder Technology*, **26**, 1143-1151 (2015), doi: 10.1016/j.apt.2015.05.016

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

Pressureless sintering of luminescent  $CaAlSiN_3:Eu$  ceramics  
*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

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

Pressureless sintering of luminescent  $CaAlSiN_3:Eu$  ceramics  
*Journal of Ceramic Science and Technology*, **6**, 63-68 (2015), doi: 10.4416/JCST2014-00047

J. Exner, P. Fuierer, R. Moos:

Aerosol Codeposition of Ceramics: Mixtures of  $Bi_2O_3-TiO_2$  and  $Bi_2O_3-V_2O_5$   
*Journal of the American Ceramic Society*, **98**, 717-723 (2015), doi: 10.1111/jace.13364

J. Exner, P. Fuierer, R. Moos:

Aerosol Deposition of (Cu,Ti) substituted Bismuth Vanadate Films  
*Thin Solid Films*, **573**, 185-190 (2014), doi: 10.1016/j.tsf.2014.11.037

M. Schubert, J. Exner, R. Moos:

Influence of Carrier Gas Composition on the Stress of  $Al_2O_3$  Coatings Prepared by the Aerosol Deposition Method  
*Materials*, **7**, 5633-5642 (2014), doi: 10.3390/ma7085633

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  
*Solid State Ionics*, **262**, 914-917 (2014), doi: 10.1016/j.ssi.2014.01.023

P. Fuierer, M. Maier, J. Exner, R. Moos:  
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

G. Hagen, J. Kita, N. Izu, U. Röder-Roith, D. Schönauer-Kamin, R. Moos:  
Planar platform for temperature dependent four-wire impedance spectroscopy – a novel tool for the characterization of functional materials  
*Sensors and Actuators B: Chemical*, **187**, 174-183 (2013), doi: 10.1016/j.snb.2012.10.068

D. Chen, A. Groß, D.C. Bono, R. Moos, H.L. Tuller:  
Electrical conductivity relaxation measurements: Application of low thermal mass heater stick  
*Solid State Ionics* **18**, June 2-7, 2013, Kyoto, Japan, Abstracts, p. 20

J. Exner, M. Maier, P. Fuierer, R. Moos:  
Aerosol Deposition of Bismuth Vanadates  
*Solid State Ionics* **18**, June 2-7, 2013, Kyoto, Japan, Abstracts, p. 132

A. Groß, T. Weller, H.L. Tuller, R. Moos:  
Electrical Conductivity Study of NO<sub>x</sub> Trap Materials BaCO<sub>3</sub> and K<sub>2</sub>CO<sub>3</sub>/La-Al<sub>2</sub>O<sub>3</sub> during NO<sub>x</sub> Exposure  
*Sensors and Actuators B: Chemical*, **187**, 461-470 (2013), doi: 10.1016/j.snb.2013.01.083

T. Stöcker, R. Moos, R. Rüger:  
Defect chemistry and thermoelectric properties of doped Delafossite-type oxide CuFeO<sub>2</sub>  
*2<sup>nd</sup> 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  
*Solid State Ionics*, **225**, 371-375 (2012), doi: 10.1016/j.ssi.2012.03.020

S. Denneler, C. Schuh, K. Benkert, R. Moos:  
Influence of sintering conditions on doped PZT ceramics for base-metal electrode multilayer actuators  
*Functional Materials Letters*, **5**, 1250022 (2012), doi: 10.1142/S1793604712500221

T. Stöcker, A. Köhler, R. Moos:  
Why does the electrical conductivity in PEDOT: PSS decrease with PSS content? A study combining thermoelectric measurements with impedance spectroscopy  
*Journal of Polymer Science Part B: Polymer Physics*, **50**, 976-983 (2012), doi: 10.1002/polb.23089

P.A. Fuierer, R. Maier, U. Röder-Roith, R. Moos:  
Processing Issues Related to the Bi-dimensional Ionic Conductivity of BIMEVOX Ceramics  
*Journal of Materials Science*, **46**, 5447-545 (2011), doi: 10.1007/s10853-011-5486-8

S. Denneler, C. Schuh, K. Benkert, R. Moos:  
Piezoelectric ceramic compositions for oxygen poor sintering conditions  
*Electroceramics XII*, June 13-16, 2010, Trondheim, Norway

K. Sahner, M. Kaspar, R. Moos:  
Assessment of the novel aerosol deposition method for room temperature preparation of metal oxide gas sensor films  
*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:  
Single crystal growth in PMN-PT and PMN-PZT  
*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

R. Moos:  
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:  
Magnetic and ferroelectric properties of Fe doped SrTiO<sub>3</sub> film  
*International Conference on Magnetism - ICM 2009*, Karlsruhe, Germany, July 26-31, 2009,  
*Journal of Physics: Conference Series* 200 (2010) 092010, doi:10.1088/1742-6596/200/9/092010
- T. Richter, C. Schuh, R. Moos, E. Suvaci:  
Single Crystal Growth and Texturing of Lead-Based Piezoelectric Ceramics via Templated Grain Growth Process  
*Functional Materials Letters*, **1**, 127-132, (2008), doi: 10.1142/S1793604708000204
- S.A. Meiss, M. Rohnke, F. Rettig, R. Moos, J. Janek:  
Ion-Conducting Probes for Low Temperature Plasmas  
*Contributions to Plasma Physics*, **48**, 473-479 (2008), doi: 10.1002/ctpp.200810076
- T. Richter, S. Denneler, C. Schuh, E. Suvaci, R. Moos:  
Textured PMN-PT and PMN-PZT  
*J. Am. Ceram. Soc.*, **91**, 929-933 (2008), doi: 10.1111/j.1551-2916.2007.02216.x
- A. Zampieri, A. Dubbe, W. Schwieger, A. Avhale, R. Moos:  
ZSM-5 zeolite films on Si substrates grown by in-situ seeding and secondary crystal growth and application in an electrochemical hydrocarbon gas sensor  
*Microporous and Mesoporous Materials*, **111**, 530-535 (2008), doi: 10.1016/j.micromeso.2007.08.026
- S. Denneler, K. Benkert, C. Schuh, R. Moos:  
Influence of sintering conditions on doped PZT ceramics for base-metal electrode multilayer actuators  
*Electroceramics XI*, Manchester, United Kingdom, 31.8.08 - 3.9.08, D2-040-O
- R. Mariychuk, A. Baumgartner, F. E. Wagner, A. Lerf, A. Dubbe, R. Moos, J. Brey:  
Synthesis, Structure, and Electric Conductivity of Ferrous Tainiolite and its Oxidative Conversion into Coarse-Grained Swellable Smectite  
*Chemistry of Materials*, **19**, 5377-5387 (2007), doi: 10.1021/cm0713778
- T. Richter, C. Schuh, S. Denneler, E. Suvaci, R. Moos:  
Grain oriented PMN-PT and PMN-PZT  
*10<sup>th</sup> International Conference and Exhibition of the European Ceramic Society*, June 17 - 21, 2007, Berlin
- A. Dubbe, R. Moos:  
H<sup>+</sup>/Na<sup>+</sup> ion equilibria of ZSM-5 with respect to surface composition  
*19. Deutsche Zeolith-Tagung*, Leipzig, 7. -9. März 2007, p. 150-151
- A. Dubbe, G. Hagen, R. Moos:  
Impedance Spectroscopy of Na<sup>+</sup> conducting zeolite ZSM-5  
*Solid State Ionics*, **177**, 2321-2323 (2006), doi: 10.1016/j.ssi.2006.04.006
- S. Srinath, M. Mahesh Kumar, K. Sahner, M.L. Post, M. Wickles, R. Moos, H. Srikanth:  
Magnetization in insulating phases of Ti<sup>4+</sup> doped SrFeO<sub>3-δ</sub>  
*J. Appl. Phys.*, **99**, 08S904 (2006), doi: 10.1063/1.2167050
- U. Röder, A. Kipka, C. Modes, R. Moos:  
Untersuchung der Kompatibilität von Silberleitpasten mit bleifreien LTCC-Folien  
*cfi/Ber. DKG*, **82** (13), 201-204 (2005)
- K. Sahner, M. Wickles, D. Schöner, F. Rettig, A. Roosen, R. Moos:  
Strontium aluminate: a novel tape material for HTCC gas sensors  
*cfi/Ber. DKG*, **82** (13), 170-173 (2005)
- K. Sahner, R. Moos, V. Vashook, U. Guth:  
Initial Defect Chemical Studies of Temperature Independent Oxygen Sensors  
*Solid State Ionics* 15, July 17-22, 2005, Baden-Baden, Germany, P 581
- A. Baumgartner, R. Mariychuk, W. Seidl, H. Porteanu, F. E. Wagner, A. Dubbe, R. Moos, J. Brey:  
Synthesis and Properties of Fluorovermiculite with High Contents of Iron  
*12. Vortragstagung der GDCh-Fachgruppe Festkörperchemie und Materialforschung*, Gießen, 12.-15..9.2004, A5, *Z. Anorg. Allg. Chem.* 2004, 630, 1710, doi: 10.1002/zaac.200470037
- R. Moos, M. Fandel, W. Schäfer:  
High-load resistors of doped titanate ceramics showing PTCR-behavior in the entire range of operation  
*J. Eur. Ceram. Soc.*, **19**, 759-763 (1999), doi: 10.1016/S0955-2219(98)00307-0
- R. Moos, S. Schöllhammer, K.H. Härdtl:  
Electron mobility of Sr<sub>1-x</sub>La<sub>x</sub>TiO<sub>3</sub> ceramics between 600°C and 1300°C  
*Appl. Phys. A.*, **65**, 291-294 (1997), doi: 10.1007/s003390050581
- R. Moos, K.H. Härdtl:  
Defect Chemistry of Donor Doped and Undoped Strontium Titanate Ceramics between 1000°C and 1400°C

*J. Am. Ceram. Soc.*, **80**, 2549-2562 (1997), doi: 10.1111/j.1151-2916.1997.tb03157.x

R. Moos, T. Bischoff, W. Menesklou, K.H. Härdtl:  
Solubility of lanthanum in strontium titanate in oxygen-rich atmospheres  
*J. Mat. Sci.*, **32**, 4247-4252 (1997), doi: 10.1023/A:1018647117607

R. Moos, K.H. Härdtl:  
Electronic Transport Properties of  $\text{Sr}_{1-x}\text{La}_x\text{TiO}_3$  Ceramics  
*J. Appl. Phys.*, **80**, 393-400 (1996), doi: 10.1063/1.362796

R. Moos, W. Menesklou, K.H. Härdtl:  
Hall mobility of undoped n-type conducting strontium titanate single crystals between 19K and 1373K  
*Appl. Phys. A.*, **61**, 389-395 (1995), doi: 10.1007/s003390050218

R. Moos, A. Gnudi, K.H. Härdtl:  
Thermopower of  $\text{Sr}_{1-x}\text{La}_x\text{TiO}_3$  Ceramics  
*J. Appl. Phys.*, **78**, 5042-5047 (1995), doi: 10.1063/1.359731

R. Moos, K.H. Härdtl:  
Dependence of the Intrinsic Conductivity Minimum of  $\text{SrTiO}_3$  Ceramics on the Sintering Atmosphere  
*J. Am. Ceram. Soc.*, **78**, 2569-2571 (1995), doi: 10.1111/j.1151-2916.1995.tb08707.x