

Year 2023

In Press

S. Biberger, N. Leupold, C. Witt, C. Greve, P. Markus, P. Ramming, D. Lukas, K. Schötz, F.-J. Kahle, C. Zhu, G. Papastavrou, A. Köhler, E.M. Herzig, R. Moos, F. Panzer:

First of Their Kind: Solar Cells with a Dry-Processed Perovskite Absorber Layer via Powder Aerosol Deposition and Hot-Pressing

open access - free *Solar RRL*, in press, doi: 10.1002/solr.202300261, <https://doi.org/10.1002/solr.202300261>

V. Malashchuk, S. Walter, M. Engler, G. Hagen, G. Link, J. Jelonnek, F. Raß, R. Moos:

Reducing Cold-Start Emissions by Microwave-Based Catalyst Heating: Simulation Studies

open access - free *Topics in Catalysis*, in press, doi: 10.1007/s11244-023-01788-6, <https://doi.org/10.1007/s11244-023-01788-6>

S. Walter, G. Hagen, D. Koch, A. Geißelmann, R. Moos:

On the Suitability of NO_x-Storage-Catalysts for Hydrogen Internal Combustion Engines and a Radio Frequency-Based NO_x Loading Monitoring

open access - free *Topics in Catalysis*, in press, doi: 10.1007/s11244-022-01727-x, <https://doi.org/10.1007/s11244-022-01727-x>

Peer Reviewed Journals

T. Wöhr, J. Kita, R. Moos, G. Hagen:

Capacitive, Highly Selective Zeolite-Based Ammonia Sensor for Flue Gas Applications

open access - free *Chemosensors*, **11**, 413 (2023), doi: [10.3390/chemosensors11070413](https://doi.org/10.3390/chemosensors11070413)

T. Nazarenius, J. Schneider, L. Hennerici, R. Moos, J. Kita:

Energy estimation of the post-treatment process for powder aerosol deposited solid electrolyte films

Functional Materials Letters, **16**, 2350014 (2023), doi: [10.1142/S1793604723500145](https://doi.org/10.1142/S1793604723500145)

T. Wöhr, J. Herrmann, J. Kita, R. Moos, G. Hagen:

Methods to investigate the temperature distribution of heated ceramic gas sensors for high-temperature applications

open access - free *Journal of Sensors and Sensor Systems*, **12**, 205-214 (2023), doi: [10.5194/jsss-12-205-2023](https://doi.org/10.5194/jsss-12-205-2023)

M. Sozak, T. Nazarenius, J. Exner, J. Kita, R. Moos:

Room temperature manufacture of dense NaSICON solid electrolyte films for all-solid-state-sodium batteries

open access - free *Journal of Materials Science*, **58**, 10108-10119 (2023), doi: [10.1007/s10853-023-08642-w](https://doi.org/10.1007/s10853-023-08642-w)

C. Steiner, T. Wöhr, M. Steiner, J. Kita, A. Müller, H. Eisazadeh, R. Moos, G. Hagen:

Resistive Multi-Gas Sensor for Simultaneously Measuring the Oxygen Stoichiometry (λ) and the NO_x Concentration in Exhausts: Engine Tests under Dynamic Conditions

open access - free *Sensors*, **23**, 5612 (2023), doi: [10.3390/s23125612](https://doi.org/10.3390/s23125612)

C. Witt, K. Schötz, M. Kuhn, N. Leupold, S. Biberger, P. Ramming, F.-J. Kahle, A. Köhler, R. Moos, E.M. Herzig, F. Panzer:

Orientation and Grain Size in MAPbI₃ Thin Films: Influence on Phase Transition, Disorder, and Defects

The Journal of Physical Chemistry C, **127**, 10563-10573 (2023), doi: [10.1021/acs.jpcc.2c08968](https://doi.org/10.1021/acs.jpcc.2c08968)

S. Müllner, T. Michlik, M. Reichel, T. Held, R. Moos, C. Roth:

Effect of Water-Soluble CMC/SBR Binder Ratios on Si-rGO Composites Using μ m- and nm-Sized Silicon as Anode Materials for Lithium-Ion Batteries

open access - free *Batteries*, **9**, 248 (2023), doi: [10.3390/batteries9050248](https://doi.org/10.3390/batteries9050248)

C. Steiner, S. Püls, M. Bektas, A. Müller, G. Hagen, R. Moos:

Resistive, Temperature-Independent Metal Oxide Gas Sensor for Detecting the Oxygen Stoichiometry (Air-Fuel Ratio) of Lean Engine Exhaust Gases

open access - free *Sensors*, **23**, 3914 (2023), doi: [10.3390/s23083914](https://doi.org/10.3390/s23083914)

H. Hoffmann, M.C. Paulisch-Rinke, M. Gernhard, Y. Jännsch, J. Timm, C. Brandmeier, S. Lechner, R. Marschall, R. Moos, I. Manke, C. Roth:

Multi-scale morphology characterization of hierarchically porous silver foam electrodes for electrochemical CO₂ reduction

open access - free *Communications Chemistry*, **6**, 50 (2023), doi: [10.1038/s42004-023-00847-z](https://doi.org/10.1038/s42004-023-00847-z)

N. Leupold, P. Ramming, I. Bauer, C. Witt, J. Jungklaus, R. Moos, H. Grüninger, F. Panzer:

How Methylammonium Iodide Reactant Size Affects Morphology and Defect Properties of Mechanochemically Synthesized MAPbI₃ Powder

open access - free *European Journal of Inorganic Chemistry*, **26**, e202200736 (2023), doi: [10.1002/ejic.202200736](https://doi.org/10.1002/ejic.202200736)

G. Hagen, J. Herrmann, X. Zhang, H. Kohler, I. Hartmann, R. Moos:

Application of a Robust Thermoelectric Gas Sensor in Firewood Combustion Exhausts

open access - free *Sensors*, **23**, 2930 (2023), doi: [10.3390/s23062930](https://doi.org/10.3390/s23062930)

C. Steiner, G. Hagen, I. Kogut, H. Fritze, R. Moos:

Analysis of defect mechanisms in nonstoichiometric ceria-zirconia by the microwave cavity perturbation method

open access - free *Journal of the American Ceramic Society*, **106**, 2875-2892 (2023), doi: [10.1111/jace.18938](https://doi.org/10.1111/jace.18938)

R. Werner, J. Kita, M. Gollner, F. Linseis, R. Moos:

Gauge to simultaneously determine the electrical conductivity, the Hall constant, and the Seebeck coefficient up to 800 °C

open access - free *Journal of Sensors and Sensor Systems*, **12**, 69-84 (2023), doi: [10.5194/jsss-12-69-2023](https://doi.org/10.5194/jsss-12-69-2023)

K. Fykouras, J. Lahnsteiner, N. Leupold, P. Tinnemans, R. Moos, F. Panzer, G. de Wijs, M. Bokdam, H. Grüninger, A. Kentgens:
Disorder to order: how halide mixing in MAPb_{1-x}Br_x perovskites restricts MA dynamics
Journal of Materials Chemistry A, **11**, 4587-4597 (2023), doi: [10.1039/D2TA09069D](https://doi.org/10.1039/D2TA09069D)

J. Distler, T. Wöhr, R. Werner, M. Gerlach, M. Gollner, F. Linseis, J. Kita, R. Moos:
Miniaturized differential scanning calorimeter with an integrated mass sensing system: first steps
open access - free *Journal of Sensors and Sensor Systems*, **12**, 9-19 (2023), doi: [10.5194/jsss-12-9-2023](https://doi.org/10.5194/jsss-12-9-2023)

V. Malashchuk, A. Jess, R. Moos:
Operando monitoring of gas drying by adsorption on supported ionic liquids: Determination of velocity of adsorption front by microwaves
Sensors and Actuators B: Chemical, **380**, 133291 (2023), doi: [10.1016/j.snb.2023.133291](https://doi.org/10.1016/j.snb.2023.133291)

D. Kohlmann, H. Wulfmeier, M. Schewe, I. Kogut, C. Steiner, R. Moos, C. Rembe, H. Fritze:
Chemical expansion of CeO_{2-δ} and Ce_{0.8}Zr_{0.2}O_{2-δ} thin films determined by laser Doppler vibrometry at high temperatures and different oxygen partial pressures
open access - free *Journal of Materials Science*, **58**, 1481-1504 (2023), doi: [10.1007/s10853-022-07830-4](https://doi.org/10.1007/s10853-022-07830-4)

Doctoral Theses

T. Nazarenus:
Aerosolbasierte Kaltabscheidung zur industriellen Produktion von oxidkeramischen Festelektrolyten für metallische Lithiumakkumulatoren
(Powder aerosol deposition for the industrial production of oxide ceramic solid electrolytes for metallic lithium accumulators)
In: R. Moos, G. Fischerauer (Hrsg.), Bayreuther Beiträge zu Materialien und Prozessen, Bd. 21, Shaker-Verlag, Düren (2023), ISBN: [978-3-8440-9142-7](https://www.isbn-international.org/product/978-3-8440-9142-7)

T. Michlik:
Zink-Glas-Kompositelektroden für wiederaufladbare Zink-Luft-Batterien
(Zinc-glass composite electrodes for rechargeable zinc-air batteries)
In: R. Moos, G. Fischerauer (Hrsg.), Bayreuther Beiträge zu Materialien und Prozessen, Bd. 20, Shaker-Verlag, Düren (2023), ISBN: [978-3-8440-9059-8](https://www.isbn-international.org/product/978-3-8440-9059-8)

A. Ruchets:
Application of solid electrolyte gas sensors based on YSZ for dynamic electrochemical measurements
In: R. Moos, G. Fischerauer (Hrsg.), Bayreuther Beiträge zur Sensorik und Messtechnik, Bd. 39, Shaker-Verlag, Düren (2023), ISBN: [978-3-8440-8889-2](https://www.isbn-international.org/product/978-3-8440-8889-2)

Year 2022

Peer Reviewed Journals

U. Eckstein, J. Exner, A. Bencan Golob, K. Ziberna, G. Drazic, H. Ursic, H. Wittkämper, C. Papp, J. Kita, R. Moos, K.G. Webber, N.H. Khansur:
Temperature-dependent dielectric anomalies in powder aerosol deposited ferroelectric ceramic films
open access - free *Journal of Materiomics*, **8**, 1239-1250 (2022), doi: [10.1016/j.jimat.2022.05.001](https://doi.org/10.1016/j.jimat.2022.05.001)

C. Witt, N. Leupold, P. Ramming, K. Schötz, R. Moos, F. Panzer:
How the Microstructure of MAPb₃ Powder Impacts Pressure-Induced Compaction and Optoelectronic Thick-Film Properties
The Journal of Physical Chemistry C, **126**, 15424-15435 (2022), doi: [10.1021/acs.jpcc.2c03329](https://doi.org/10.1021/acs.jpcc.2c03329)

S. Biberger, K. Schötz, P. Ramming, N. Leupold, R. Moos, A. Köhler, H. Grüninger, F. Panzer:
How the ionic liquid BMIMBF₄ influences the formation and optoelectronic properties of MAPb₃ thin films
open access - free *Journal of Materials Chemistry A*, **10**, 18038-18049 (2022), doi: [10.1039/d2ta04448j](https://doi.org/10.1039/d2ta04448j)

S. Bresch, B. Mieller, R. Moos, T. Rabe:
Lowering the sintering temperature of calcium manganate for thermoelectric applications
open access - free *AIP Advances*, **12**, 085116 (2022), doi: [10.1063/5.0098015](https://doi.org/10.1063/5.0098015)

Y. Jännsch, M. Hämmerle, E. Simon, M. Fleischer, R. Moos:
Contributions of Pulsed Operation Along with Proper Choice of the Substrate for Stabilizing the Catalyst Performance in Electrochemical Reduction of CO₂ Toward Ethylene in Gas Diffusion Electrode Based Flow Cell Reactors
open access - free *Energy Technology*, **10**, 2200046 (2022), doi: [10.1002/ente.202200046](https://doi.org/10.1002/ente.202200046)

H. Wulfmeier, D. Kohlmann, T. Defferriere, C. Steiner, R. Moos, H.L. Tuller, H. Fritze:
Thin-film chemical expansion of ceria based solid solutions: laser vibrometry study
open access - free *Zeitschrift für Physikalische Chemie*, **236**, 1013-1053 (2022), doi: [10.1515/zpch-2021-3125](https://doi.org/10.1515/zpch-2021-3125)

T. Nazarenus, K. Schlesier, F. Lebeda, M. Retsch, R. Moos:
Microstrain release decouples electronic and thermal conductivity in powder aerosol deposited films
Materials Letters, **322**, 132461 (2022), doi: [10.1016/j.matlet.2022.132461](https://doi.org/10.1016/j.matlet.2022.132461)

R. Werner, J.S. Matejka, D. Schönauer-Kamin, R. Moos:
From Thermoelectric Powder Directly to Thermoelectric Generators: Flexible Bi₂Te₃ Films on Polymer Sheets Prepared by the Powder Aerosol Deposition Method at Room Temperature

open access - free *Energy Technology*, **10**, 2101091 (2022), doi: [10.1002/ente.202101091](https://doi.org/10.1002/ente.202101091)

S. Walter, P. Schwanzler, C. Steiner, G. Hagen, H.-P. Rabl, M. Dietrich, R. Moos:
Mixing Rules for an Exact Determination of the Dielectric Properties of Engine Soot Using the Microwave Cavity Perturbation Method and Its Application in Gasoline Particulate Filters

open access - free *Sensors*, **22**, 3311 (2022), doi: [10.3390/s22093311](https://doi.org/10.3390/s22093311)

M. Linz, J. Exner, T. Nazarenus, J. Kita, R. Moos:

Mobile sealing and repairing of damaged ceramic coatings by powder aerosol deposition at room temperature

open access - free *Open Ceramics*, **10**, 100253 (2022), doi: [10.1016/j.oceram.2022.100253](https://doi.org/10.1016/j.oceram.2022.100253)

T. Nazarenus, K. Schlesier, S. Biberger, J. Exner, J. Kita, A. Köhler, R. Moos:

Posttreatment of powder aerosol deposited oxide ceramic films by high power LED

open access - free *International Journal of Applied Ceramic Technology*, **19**, 1540-1553 (2022), doi: [10.1111/ijac.13977](https://doi.org/10.1111/ijac.13977)

S. Bresch, B. Mieller, P. Mrkwitschka, R. Moos, T. Rabe:

Glass-ceramic composites as insulation material for thermoelectric oxide multilayer generators

open access - free *Journal of the American Ceramic Society*, **105**, 2140-2149 (2022), doi: [10.1111/jace.18235](https://doi.org/10.1111/jace.18235)

C. Steiner, G. Hagen, I. Kogut, H. Fritze, R. Moos:

Analysis of defect chemistry and microstructural effects of non-stoichiometric ceria by the high-temperature microwave cavity perturbation method

Journal of the European Ceramic Society, **42**, 499-511 (2022), doi: [10.1016/j.jeurceramsoc.2021.08.053](https://doi.org/10.1016/j.jeurceramsoc.2021.08.053)

Doctoral Theses

S. Chalupczok:

Untersuchung einer voltammetrischen Methode zur pH-Wert-Messung mit protonenleitenden Funktionsschichten

(Investigations on a voltammetric method for pH measurements with proton-conducting functional layers)

In: R. Moos, G. Fischerauer (Hrsg.), Bayreuther Beiträge zur Sensorik und Messtechnik, Bd. 38, Shaker-Verlag, Düren (2022), ISBN: [978-3-8440-8865-6](https://doi.org/978-3-8440-8865-6)

S. Bresch:

Oxidkeramische Werkstoffe und Folien für thermoelektrische Multilayergeneratoren

(Oxide ceramic materials and tapes for thermoelectric multilayer generators)

In: R. Moos, G. Fischerauer (Hrsg.), Bayreuther Beiträge zu Materialien und Prozessen, Bd. 19, Shaker-Verlag, Düren (2022), ISBN: [978-3-8440-8802-1](https://doi.org/978-3-8440-8802-1)

Y. Jännsch:

Elektrochemische CO₂-Reduktion durch gepulste Elektrolyse: Entwicklung und Optimierung eines Ethen-selektiven, langzeitstabilen und skalierbaren Prozesses

(Electrochemical CO₂ reduction by pulsed electrolysis: Development and optimization of an ethene-selective, long-term stable and scalable process)

In: R. Moos, G. Fischerauer (Hrsg.), Bayreuther Beiträge zu Materialien und Prozessen, Bd. 18, Shaker-Verlag, Düren (2022), ISBN: [978-3-8440-8770-3](https://doi.org/978-3-8440-8770-3)

Year 2021

Peer Reviewed Journals

A. Ruchets, N. Donker, J. Zosel, D. Schönauer-Kamin, R. Moos, U. Guth, M. Mertig:

CO Gas Detection on Pt|YSZ|Pt Solid Electrolyte Sensors by Methods Based on Dynamic Voltage Variations

Journal of The Electrochemical Society, **168**, 117506 (2021), doi: [10.1149/1945-7111/ac2fc5](https://doi.org/10.1149/1945-7111/ac2fc5)

J. Exner, M. Linz, J. Kita, R. Moos:

Making powder aerosol deposition accessible for small amounts: A novel and modular approach to produce dense ceramic films

open access - free *International Journal of Applied Ceramic Technology*, **18**, 2178-2196 (2021), doi: [10.1111/ijac.13841](https://doi.org/10.1111/ijac.13841)

P. Ramming, N. Leupold, K. Schötz, A. Köhler, R. Moos, H. Grüninger, F. Panzer:

Suppressed ion migration in powder-based perovskite thick films using an ionic liquid

open access - free *Journal of Materials Chemistry C*, **9**, 11827-11837 (2021), doi: [10.1039/D1TC01554K](https://doi.org/10.1039/D1TC01554K)

I. Kogut, C. Steiner, H. Wulfmeier, A. Wollbrink, G. Hagen, R. Moos, H. Fritze:

Comparison of the electrical conductivity of bulk and film Ce_{1-x}Zr_xO_{2-δ} in oxygen-depleted atmospheres at high temperatures

open access - free *Journal of Materials Science*, **56**, 17191-17204 (2021), doi: [10.1007/s10853-021-06348-5](https://doi.org/10.1007/s10853-021-06348-5)

Y. Jännsch, M. Hämmerle, J. Leung, E. Simon, M. Fleischer, R. Moos:

Gas evolution in electrochemical flow cell reactors induces resistance gradients with consequences for the positioning of the reference electrode

open access - free *RSC Advances*, **11**, 28189-28197 (2021), doi: [10.1039/D1RA05345K](https://doi.org/10.1039/D1RA05345K)

R. Wagner, D. Schönauer-Kamin, W. Bätzer, R. Moos:

Concept study with experimental proof for a new type of detector for gas chromatography

Sensors and Actuators B: Chemical, **346**, 130490 (2021), doi: [10.1016/j.snb.2021.130490](https://doi.org/10.1016/j.snb.2021.130490)

N. Leupold, A.L. Seibel, R. Moos, F. Panzer:

Electrical Conductivity of Halide Perovskites Follows Expectations from Classical Defect Chemistry

open access - free *European Journal of Inorganic Chemistry*, **2021**, 2882-2889 (2021), doi: [10.1002/ejic.202100381](https://doi.org/10.1002/ejic.202100381)

M. Linz, J. Exner, J. Kita, F. Bühner, M. Seipenbusch, R. Moos:

Discontinuous Powder Aerosol Deposition: An Approach to Prepare Films Using Smallest Powder Quantities

open access - free *Coatings*, **11**, 844 (2021), doi: [10.3390/coatings11070844](https://doi.org/10.3390/coatings11070844)

T. Nazarenus, Y. Sun, J. Exner, J. Kita, R. Moos:

Powder Aerosol Deposition as a Method to Produce Garnet-Type Solid Ceramic Electrolytes: A Study on Electrochemical Film Properties and Industrial Application

open access - free *Energy Technology*, **9**, 2100211 (2021), doi: [10.1002/ente.202100211](https://doi.org/10.1002/ente.202100211)

P. Schwanzer, M. Schillinger, J. Mieslinger, S. Walter, G. Hagen, S. Märkl, G. Haft, M. Dietrich, R. Moos, M. Gaderer, H.-P. Rabl:

A Synthetic Ash-Loading Method for Gasoline Particulate Filters with Active Oil Injection

SAE International Journal of Engines, **14**, 493-505 (2021), doi: [10.4271/03-14-04-0029](https://doi.org/10.4271/03-14-04-0029)

P. Glosse, S. Denneler, O. Stier, R. Moos:

Investigation of the Powder Aerosol Deposition Method Using Shadowgraph Imaging

open access - free *Materials*, **14**, 2502 (2021), doi: [10.3390/ma14102502](https://doi.org/10.3390/ma14102502)

N. Leupold, S. Denneler, G. Rieger, R. Moos:

Powder Treatment for Increased Thickness of Iron Coatings Produced by the Powder Aerosol Deposition Method and Formation of Iron–Alumina Multilayer Structures

open access - free *Journal of Thermal Spray Technology*, **30**, 480-487 (2021), doi: [10.1007/s11666-020-01098-3](https://doi.org/10.1007/s11666-020-01098-3)

N. Leupold, F. Panzer:

Recent Advances and Perspectives on Powder-Based Halide Perovskite Film Processing

open access - free *Advanced Functional Materials*, **31**, 2007350 (2021), doi: [10.1002/adfm.202007350](https://doi.org/10.1002/adfm.202007350)

R. Wang, R. Moos:

Electrical conductivity determination of semiconductors by utilizing photography, finite element simulation and resistance measurement

open access - free *Journal of Materials Science*, **56**, 10449-10457 (2021), doi: [10.1007/s10853-021-05949-4](https://doi.org/10.1007/s10853-021-05949-4)

R. Werner, J. Kita, M. Gollner, F. Linseis, R. Moos:

Novel, low-cost device to simultaneously measure the electrical conductivity and the Hall coefficient from room temperature up to 600 °C

open access - free *Journal of Sensors and Sensor Systems*, **10**, 71-81 (2021), doi: [10.5194/jsss-10-71-2021](https://doi.org/10.5194/jsss-10-71-2021)

V. Malashchuk, A. Jess, R. Moos:

Determination of water loading of supported ionic liquids by microwave analysis - A contribution for operando monitoring of gas drying by adsorption

Sensors and Actuators B: Chemical, **335**, 129646 (2021), doi: [10.1016/j.snb.2021.129646](https://doi.org/10.1016/j.snb.2021.129646)

I. Kogut, A. Wollbrink, C. Steiner, F.-E. El Azzouzi, R. Moos, H. Fritze:

Linking the Electrical Conductivity and Non-Stoichiometry of Thin Film $Ce_{1-x}Zr_xO_{2-\delta}$ by a Resonant Nanobalance Approach

open access - free *Materials*, **14**, 748 (2021), doi: [10.3390/ma14040748](https://doi.org/10.3390/ma14040748)

H. Grüniger, M. Bokdam, N. Leupold, P. Tinnemans, R. Moos, G.A. De Wijs, F. Panzer, A.P.M. Kentgens:

Microscopic (Dis)order and Dynamics of Cations in Mixed FA/MA Lead Halide Perovskites

The Journal of Physical Chemistry C, **125**, 1742-1753 (2021), doi: [10.1021/acs.jpcc.0c10042](https://doi.org/10.1021/acs.jpcc.0c10042)

S. Bresch, B. Mieller, D. Schönauer-Kamin, R. Moos, T. Reimann, F. Giovannelli, T. Rabe:

Influence of pressure and dwell time on pressure-assisted sintering of calcium cobaltite

open access - free *Journal of the American Ceramic Society*, **104**, 917-927 (2021), doi: [10.1111/jace.17541](https://doi.org/10.1111/jace.17541)

Doctoral Theses

N. Müller:

Untersuchungen zur Teilentladungsresistenz von Polymeren

(Investigations on the partial discharge resistance of polymers)

In: R. Moos, G. Fischerauer (Hrsg.), Bayreuther Beiträge zu Materialien und Prozessen, Bd. 17, Shaker-Verlag, Düren (2021), ISBN: [978-3-8440-8168-8](https://doi.org/978-3-8440-8168-8)

R. Wagner:

Zinkoxid als Material zur resistiven Detektion von NO₂ bei Raumtemperatur

(Zinc oxide as a material to detect resistively NO₂ at room temperature)

In: R. Moos, G. Fischerauer (Hrsg.), Bayreuther Beiträge zur Sensorik und Messtechnik, Bd. 35, Shaker-Verlag, Düren (2021), ISBN: [978-3-8440-8039-1](https://doi.org/978-3-8440-8039-1)

Year 2020

Peer Reviewed Journals

R. Wagner, D. Schönauer-Kamin, R. Moos:

Influence of Humidity and Different Gases on a Resistive Room Temperature NO₂ Gas Dosimeter Based on Al-Doped ZnO for ppb-Concentration Detection

open access - free *Journal of The Electrochemical Society*, **167**, 167516 (2020), doi: [10.1149/1945-7111/abcb65](https://doi.org/10.1149/1945-7111/abcb65)

T. Nazarenus, J. Kita, R. Moos, J. Exner:

Laser-Annealing of Thermoelectric CuFe_{0.98}Sn_{0.02}O₂ Films Produced by Powder Aerosol Deposition Method

open access - free *Advanced Materials Interfaces*, **7**, 2001114 (2020), doi: [10.1002/admi.202001114](https://doi.org/10.1002/admi.202001114)

Y. Jännsch, J.J. Leung, M. Hämmerle, E. Magori, K. Wiesner-Fleischer, E. Simon, M. Fleischer, R. Moos:
Pulsed potential electrochemical CO₂ reduction for enhanced stability and catalyst reactivation of copper electrodes
open access - free *Electrochemistry Communications*, **121**, 106861 (2020), doi: [10.1016/j.elecom.2020.106861](https://doi.org/10.1016/j.elecom.2020.106861)

A. Ruchets, N. Donker, J. Zosel, D. Schönauer-Kamin, R. Moos, U. Guth, M. Mertig:
Cyclic and square-wave voltammetry for selective simultaneous NO and O₂ gas detection by means of solid electrolyte sensors
open access - free *Journal of Sensors and Sensor Systems*, **9**, 355-362 (2020), doi: [10.5194/jsss-9-355-2020](https://doi.org/10.5194/jsss-9-355-2020)

C. Steiner, S. Walter, V. Malashchuk, G. Hagen, I. Kogut, H. Fritze, R. Moos:
Determination of the Dielectric Properties of Storage Materials for Exhaust Gas Aftertreatment Using the Microwave Cavity Perturbation Method
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J. Herrmann, G. Hagen, J. Kita, F. Noack, D. Bleicker, R. Moos:
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Untersuchung und Modellierung der elektrochemischen Vorgänge von Elektroden für Mischpotential-Sensoren
(Investigation and modelling of electrochemical processes of electrodes for mixed potential sensors)

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Untersuchung von Sauerstoffreaktionen an Pt-basierten Modellelektroden auf Yttriumoxid-stabilisiertem Zirkoniumdioxid
(Investigation of oxygen reactions at Pt-based model electrodes on yttria-stabilized zirconium dioxide)

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Bestimmung der thermischen Stabilität von ionischen Fluiden auf porösen Trägern und festen Katalysatoren mittels elektrischer Sensoren
(Determination of the thermal stability of ionic fluids on porous supports and on solid catalysts by electrical sensors)

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