

Articles on Powder Aerosol Deposition Methods (ADM)

Overview articles

M. Schubert, D. Hanft, T. Nazarenus, J. Exner, M. Schubert, P. Nieke, P. Glosse, N. Leupold, J. Kita, R. Moos:

Powder aerosol deposition method — novel applications in the field of sensing and energy technology
open access - free *Functional Materials Letters*, **12**, 1930005 (2019), doi: [10.1142/S1793604719300056](https://doi.org/10.1142/S1793604719300056)

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
open access - free *Journal of Ceramic Science and Technology*, **6**, 147-182 (2015), doi: [10.4416/JCST2015-00018](https://doi.org/10.4416/JCST2015-00018)

Regular peer-reviewed articles

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

In- and through-plane conductivity of 8YSZ films produced at room temperature by aerosol deposition
Journal of Materials Science, **54**, 13619-13634 (2019), doi: [10.1007/s10853-019-03844-7](https://doi.org/10.1007/s10853-019-03844-7)

M. Schubert, J. Kita, C. Münch, R. Moos:

Investigation of the in situ calcination of aerosol co-deposited NiO-Mn₂O₃ films
Functional Materials Letters, **12**, 1950039 (2019), doi: [10.1142/S1793604719500395](https://doi.org/10.1142/S1793604719500395)

M. Schubert, C. Münch, S. Schuurman, V. Poulain, J. Kita, R. Moos:

Novel Method for NTC Thermistor Production by Aerosol Co-Deposition and Combined Sintering
open access - free *Sensors*, **19**, 1632 (2019), doi: [10.3390/s19071632](https://doi.org/10.3390/s19071632)

M. Schubert, N. Leupold, J. Kita, R. Moos:

Oxygen partial pressure dependency of the electrical conductivity of aerosol deposited alumina films between 650 °C and 900 °C
Materials Letters, **245**, 208-210 (2019), doi: [10.1016/j.matlet.2019.02.094](https://doi.org/10.1016/j.matlet.2019.02.094)

P. Nieke, J. Kita, M. Häming, R. Moos:

Manufacturing Dense Thick Films of Lunar Regolith Simulant EAC-1 at Room Temperature
open access - free *Materials*, **12**, 487 (2019), doi: [10.3390/ma12030487](https://doi.org/10.3390/ma12030487)

J. Exner, M. Schubert, D. Hanft, J. Kita, R. Moos:

How to treat powders for the room temperature aerosol deposition method to avoid porous, low strength ceramic films
Journal of the European Ceramic Society, **39**, 592-600 (2019), doi: [10.1016/j.jeurceramsoc.2018.08.008](https://doi.org/10.1016/j.jeurceramsoc.2018.08.008)

M. Schubert, C. Münch, S. Schuurman, V. Poulain, J. Kita, R. Moos:

Thermal Treatment of Aerosol Deposited NiMn₂O₄ NTC Thermistors for Improved Aging Stability
open access - free *Sensors*, **18**, 3982 (2018), doi: [10.3390/s18113982](https://doi.org/10.3390/s18113982)

J. Exner, H. Pöpke, F.-M. Fuchs, J. Kita, R. Moos:

Annealing of Gadolinium-Doped Ceria (GDC) Films Produced by the Aerosol Deposition Method
open access - free *Materials*, **11**, 2072 (2018), doi: [10.3390/ma11112072](https://doi.org/10.3390/ma11112072)

D. Hanft, P. Glosse, S. Denneker, T. Berthold, M. Oomen, S. Kauffmann-Weiss, F. Weis, W. Häßler, B. Holzapfel, R. Moos:

The Aerosol Deposition Method: A Modified Aerosol Generation Unit to Improve Coating Quality
open access - free *Materials*, **11**, 1572 (2018), doi: [10.3390/ma11091572](https://doi.org/10.3390/ma11091572)

D. Hanft, M. Bektas, R. Moos:

Powder pre-treatment for aerosol deposition of tin dioxide coatings for gas sensors
open access - free *Materials*, **11**, 1342 (2018), doi: [10.3390/ma11081342](https://doi.org/10.3390/ma11081342)

M. Schubert, N. Leupold, J. Exner, J. Kita, R. Moos:

High-Temperature Electrical Insulation Behavior of Alumina Films Prepared at Room Temperature by Aerosol Deposition and Influence of Annealing Process and Powder Impurities
Journal of Thermal Spray Technology, **27**, 870-879 (2018), doi: [10.1007/s11666-018-0719-x](https://doi.org/10.1007/s11666-018-0719-x)

N. Leupold, M. Schubert, J. Kita, R. Moos:

Influence of high temperature annealing on the dielectric properties of alumina films prepared by the aerosol deposition method
Functional Materials Letters, **11**, 1850022 (2018), doi: [10.1142/S1793604718500224](https://doi.org/10.1142/S1793604718500224)

M. Schubert, C. Münch, S. Schuurman, V. Poulain, J. Kita, R. Moos:

Characterization of Nickel Manganite NTC thermistor films prepared by Aerosol Deposition at room temperature
Journal of the European Ceramic Society, **38**, 613-619 (2018), doi: [10.1016/j.jeurceramsoc.2017.09.005](https://doi.org/10.1016/j.jeurceramsoc.2017.09.005)

M. Schubert, J. Kita, C. Münch, R. Moos:

Analysis of the characteristics of thick-film NTC thermistor devices manufactured by screen-printing and firing technique and by room temperature aerosol deposition method (ADM)

Functional Materials Letters, **10**, 1750073 (2017), doi: [10.1142/S1793604717500734](https://doi.org/10.1142/S1793604717500734)

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

Effect of substrate hardness and surface roughness on the film formation of aerosol-deposited ceramic films

Functional Materials Letters, **10**, 1750045 (2017), doi: [10.1142/S179360471750045X](https://doi.org/10.1142/S179360471750045X)

D. Hanft, J. Exner, R. Moos:

Thick-films of garnet-type lithium ion conductor prepared by the Aerosol Deposition Method: The role of morphology and annealing treatment on the ionic conductivity

Journal of Power Sources, **361**, 61-69 (2017), doi: [10.1016/j.jpowsour.2017.06.061](https://doi.org/10.1016/j.jpowsour.2017.06.061)

S. Kauffmann-Weiss, W. Hässler, E. Guenther, J. Scheiter, S. Dennele, 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 MgB₂ powder

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

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

open access - free *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 CuFeO₂

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

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

Tuning of the electrical conductivity of Sr(Ti,Fe)O₃ oxygen sensing films by aerosol co-deposition with Al₂O₃

Sensors and Actuators B: Chemical, **230**, 427-433 (2016), doi: [10.1016/j.snb.2016.02.033](https://doi.org/10.1016/j.snb.2016.02.033)

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](https://doi.org/10.1016/j.apt.2015.05.016)

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

Aerosol Codeposition of Ceramics: Mixtures of Bi₂O₃-TiO₂ and Bi₂O₃-V₂O₅

Journal of the American Ceramic Society, **98**, 717-723 (2015), doi: [10.1111/jace.13364](https://doi.org/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](https://doi.org/10.1016/j.tsf.2014.11.037)

M. Bektas, D. Hanft, D. Schönauer-Kamin, T. Stöcker, G. Hagen, R. Moos:

Aerosol-deposited BaFe_{0.7}Ta_{0.3}O_{3-δ} for nitrogen monoxide and temperature-independent oxygen sensing

open access - free *Journal of Sensors and Sensor Systems*, **3**, 223-229 (2014), doi: [10.5194/jsss-3-223-2014](https://doi.org/10.5194/jsss-3-223-2014)

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

Influence of carrier gas composition on the stress of Al₂O₃ coatings prepared by the Aerosol Deposition Method

open access - free *Materials*, **7**, 5633-5642 (2014), doi: [10.3390/ma7085633](https://doi.org/10.3390/ma7085633)

K. Sahnner, 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](https://doi.org/10.1016/j.snb.2009.03.011)