

as of September 21, 2018

## Selection of ceramic microsystems-related papers

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

Combined resistive and thermoelectric oxygen sensor with almost temperature-independent characteristics

**open access - free** *Journal of Sensors and Sensor Systems*, **7**, 289-297 (2018), doi: [10.5194/jsss-7-289-2018](https://doi.org/10.5194/jsss-7-289-2018)

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)

A. Bogner, C. Steiner, S. Walter, J. Kita, G. Hagen, R. Moos:

Planar Microstrip Ring Resonators for Microwave-Based Gas Sensing: Design Aspects and Initial Transducers for Humidity and Ammonia Sensing

*Sensors*, **17**, 2422 (2017), doi: [10.3390/s17102422](https://doi.org/10.3390/s17102422)

T. Ritter, G. Hagen, J. Kita, S. Wiegärtner, F. Schubert, R. Moos:

Self-Heated HTCC-based Ceramic Disc for Mixed Potential Sensors and for Direct Conversion Sensors for Automotive Catalysts

*Sensors and Actuators B: Chemical*, **248**, 793-802 (2017), doi: [10.1016/j.snb.2016.11.079](https://doi.org/10.1016/j.snb.2016.11.079)

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

Optimization of a sensor for a Tian-Calvet calorimeter with LTCC-based sensor discs

*Journal of Sensors and Sensor Systems*, **5**, 381-388 (2016), doi: [10.5194/jsss-5-381-2016](https://doi.org/10.5194/jsss-5-381-2016)

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

First steps to develop a sensor for a Tian-Calvet calorimeter with increased sensitivity

*Journal of Sensors and Sensor Systems*, **5**, 205-212 (2016), doi: [10.5194/jsss-5-205-2016](https://doi.org/10.5194/jsss-5-205-2016)

A. Brandenburg, E. Wappler, J. Kita, R. Moos:

Miniaturized ceramic DSC device with strain gauge-based mass detection - First steps to realize a fully integrated DSC/TGA device

*Sensors and Actuators A: Physical*, **241**, 145-151 (2016), doi: [10.1016/j.sna.2016.02.011](https://doi.org/10.1016/j.sna.2016.02.011)

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](https://doi.org/10.1016/j.microrel.2015.10.011)

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

Optimierung eines neuentwickelten Sensorkopfes für ein Tian-Calvet-Kalorimeter

Sensoren und Messsysteme 2016, 10.5.-11.5.2016, Nürnberg, p. 50-52, doi: [10.5162/sensoren2016/1.2.2](https://doi.org/10.5162/sensoren2016/1.2.2)

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

Sensor Stack for Tian-Calvet Calorimeter made in LTCC-Technology

*IMAPS/ACerS 12<sup>th</sup> International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT 2016)*, Denver, April 19-21, 2016, p. 19-23

J. Kita, S. Wiegärtner, A. Prince, P. Weigand, R. Moos:

Evaluation of screen-printable type S (Pt-PtRh) thermocouples on different ceramic substrates

*IMAPS/ACerS 12<sup>th</sup> International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT 2016)*, Denver, April 19-21, 2016, p. 53-57

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

Neuentwicklung eines Sensorkopfes für ein Tian-Calvet-Kalorimeter

G. Gerlach, A. Schütze (Hrsg.), *12. Dresdner Sensor-Symposium*, 7.-9. Dezember 2015, Dresden, p. 222-226, doi: [10.5162/12dss2015/P7.2](https://doi.org/10.5162/12dss2015/P7.2)

G. Hagen, N. Leupold, S. Wiegärtner, J. Kita, R. Moos:

Neuartige Sensoranwendung zur Katalysator-Materialcharakterisierung

G. Gerlach, A. Schütze (Hrsg.), *12. Dresdner Sensor-Symposium*, 7.-9. Dezember 2015, Dresden, p. 230-233, doi: [10.5162/12dss2015/P7.5](https://doi.org/10.5162/12dss2015/P7.5)

J. Exner, R. Moos:

Ermittlung spezifischer Materialkennwerte von Schichten mittels Interdigital-Elektroden

G. Gerlach, A. Schütze (Hrsg.), *12. Dresdner Sensor-Symposium*, 7.-9. Dezember 2015, Dresden, p. 256-259, doi: [10.5162/12dss2015/P7.10](https://doi.org/10.5162/12dss2015/P7.10)

J. Kita, S. Wiegärtner, R. Moos, P. Weigand, A. Pliscott, M.H. LaBranche, H.D. Glicksman:

Screen-printable type S thermocouple for thick-film technology

*Eurosensors XXIX*, September 6 - 9, 2015, Freiburg, Germany, MP-K03

*Procedia Engineering*, **120**, 828-831 (2015), doi: [10.1016/j.proeng.2015.08.692](https://doi.org/10.1016/j.proeng.2015.08.692)

- A. Brandenburg, E. Wappler, J. Kita, R. Moos:  
First approaches to integrate a strain gauge-based mass detection system into a miniaturized DSC-device  
*Eurosensors XXIX*, September 6 - 9, 2015, Freiburg, Germany, BS02-3  
*Procedia Engineering*, **120**, 116-119 (2015), doi: 10.1016/j.proeng.2015.08.579
- F. Schubert, S. Wollenhaupt, J. Kita, G. Hagen, R. Moos:  
Lessons learned during the development of a manufacturing process for switching-type lambda sensors as a basis for new exhaust gas sensors  
*90. DKG Jahrestagung / Symposium Hochleistungskeramik 2015*, Bayreuth, 15.3.-19.3.2015, p. 167
- 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
- D. Ortolino, A. Engelbrecht, H. Lauterbach, M. Bräu, J. Kita, R. Moos:  
Effect of Repeated Firing on the Resistance of Screen-Printed Thick Film Conductors  
*Journal of Ceramic Science and Technology*, **5**, 317-326 (2014), doi: 10.4416/JCST2014-00029
- J. Kita, A. Brandenburg, I. Sudina, R. Moos:  
High-Temperature Miniaturized Furnace manufactured in HTCC-Technology  
38<sup>th</sup> International Microelectronics and Packaging IMAPS Conference, Rzeszów-Czarna, Poland, 21. - 24.09.2014
- A. Brandenburg, E. Wappler, R. Moos, J. Kita:  
Development and optimization of a novel miniaturized ceramic differential scanning calorimeter  
*Thermal Analysis and Calorimetry in Industry and Research - 40 Years of GEFTA*, Berlin, Germany, September 16 - 19, 2014, p. E2
- A. Brandenburg, J. Kita, E. Wappler, R. Moos:  
Optimierung eines LTCC-basierten miniaturisierten dynamischen Wärmestromdifferenzkalorimeters  
*Sensoren und Messsysteme 2014*, 3.6.-4.6.2014, Nürnberg, ISBN 978-3-8007-3622-5
- J. Kita, W. Missal, E. Wappler, F. Bechtold, R. Moos:  
Development of a Miniaturized Ceramic Differential Calorimeter Device in LTCC Technology  
*Journal of Ceramic Science and Technology*, **4**, 137-144 (2014), doi: 10.4416/JCST2013-00008
- A. Brandenburg, J. Kita, A. Groß, R. Moos:  
Novel tube-type LTCC transducers with buried heaters and inner interdigitated electrodes as a platform for gas sensing at various high temperatures  
*Sensors and Actuators B: Chemical*, **189**, 80-88 (2013), doi: 10.1016/j.snb.2012.12.119
- 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
- W. Missal, J. Kita, E. Wappler, F. Bechtold, R. Moos:  
Calorimetric Sensitivity and Thermal Resolution of a Novel Miniaturized Ceramic DSC Chip in LTCC Technology  
*Thermochimica Acta*, **543**, 142-149 (2012), doi: 10.1016/j.tca.2012.05.019
- W. Missal, J. Kita, E. Wappler, F. Gora, A. Kipka, T. Bartnitzek, F. Bechtold, D. Schabbel, B. Pawlowski, R. Moos:  
Miniaturized Ceramic Differential Scanning Calorimeter with Integrated Oven and Crucible in LTCC Technology  
*Sensors and Actuators A: Physical*, **172**, 21-26 (2011), doi: 10.1016/j.sna.2011.01.025
- D. Ortolino, J. Kita, R. Moos, R. Wurm, A. Pletsch, K. Beart:  
Modeling the Failure Mechanism of Electrical Vias Manufactured in Thick-Film Technology  
*IMAPS/ACerS 9<sup>th</sup> International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT 2013)*, Orlando, Florida, April 23-25, 2013
- D. Ortolino, J. Kita, R. Wurm, E. Blum, K. Beart, R. Moos:  
Investigation of the short-time high-current behavior of vias manufactured in hybrid thick-film technology  
*Microelectronics Reliability*, **34**, 1257-263 (2011), doi: 10.1016/j.microrel.2011.02.025
- D. Ortolino, J. Kita, R. Wurm, E. Blum, K. Beart, R. Moos:  
Investigation of non-symmetric contacting and voids in electrical vias produced in hybrid thick-film technology  
*35<sup>th</sup> International Microelectronics and Packaging IMAPS Conference*, Gdansk, Poland 21. - 24.09.2011, p. 289-292
- M. Hrovat, D. Belavič, J. Kita, J. Holc, J. Cilenšek, S. Drnovšek:  
Thick-film NTC thermistors and LTCC materials: The dependence of the electrical and microstructural characteristics on the firing temperature  
*Journal of the European Ceramic Society*, **29**, 3265–3271 (2009), doi:10.1016/j.jeurceramsoc.2009.05.019
- 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
- D. Nowak, E. Miś, A. Dzedzic, J. Kita:  
Fabrication and electrical properties of laser-shaped thick-film and LTCC microresistors

*Microelectronics Reliability*, **49**, 600-606 (2009), doi: 10.1016/j.microrel.2009.02.019

D. Biskupski, A. Geupel, K. Wiesner, M. Fleischer, R. Moos:  
Platform for a hydrocarbon exhaust gas sensor utilizing a pumping cell and a conductometric sensor  
*Sensors*, **9**, 7498-7508 (2009), doi:10.3390/s90907498

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

J. Kita, R. Moos:  
Properties and Applications of Zero-Shrinkage LTCC  
*XXXIII Int'l Conference of International Microelectronics and Packaging Society IMAPS Poland*, Gliwice – Pszczyna, September 21-24, 2009, p. 183-189

D. Nowak, A. Dziedzic, T. Piasecki, J. Kita:  
Laser-Shaped Thick-film Inductors Embedded in Ferrite Material  
*XXXIII Int'l Conference of International Microelectronics and Packaging Society IMAPS Poland*, Gliwice – Pszczyna, September 21-24, 2009, p. 273-276

M. Hrovat, D. Belavič, H. Uršič, J. Kita, J. Holc, S. Drnovšek, J. Cilenšek, M.S. Zarnik, M. Kosec:  
Thick-Film Pressure / Force Sensors on Different LTCC Substrates; a Characterization and Evaluation  
*Proc. of 2009 IMAPS/ACerS, 5<sup>th</sup> Intern. Conf. on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT)*, Denver, Colorado, 21.4-23.4.2009

D. Biskupski, K. Wiesner, J. Kita, M. Fleischer, R. Moos:  
Automotive Exhaust Gas Sensor Based on a Combination of an Electrochemical Pumping Cell and a Resistive Gas Sensor  
*Sensor Letters*, **6**, 803-807 (2008), doi: 10.1166/sl.2008.505

J. Kita, R. Moos:  
Development of LTCC-Materials and their Applications - an Overview  
*Informacije MIDEEM - Journal of Microelectronics Electronic Components and Materials*, **38**, 219-224 (2008)

S. Achmann, M. Hämmerle, J. Kita, R. Moos:  
Miniaturized low temperature co-fired ceramics (LTCC) biosensor for amperometric gas sensing  
*Sensors and Actuators B: Chemical*, **135**, 89-95 (2008), doi: 10.1016/j.snb.2008.07.024

E. Miš, A. Dziedzic, T. Piasecki, J. Kita, R. Moos:  
Geometrical, electrical and stability properties of thick-film and LTCC microcapacitors  
*Microelectronics International*, **25**, 37-41 (2008), doi: 10.1108/13565360810875994

J. Kita, R. Moos:  
Development of LTCC-Materials and Their Applications – an Overview  
*Proceedings 44<sup>th</sup> International Conference on Microelectronics, Devices and Materials*, Fiesa, Slovenia, 17.-19. 9.2008, ISBN 978-961-91023-7-4, p. 3-10

M. Hrovat, D. Belavič, H. Uršič, J. Kita, J. Holc, S. Drnovšek, J. Cilenšek, M. Kosec, R. Moos:  
An Investigation of Thick-film Materials for Temperature and Pressure Sensors on Self-constrained LTCC Substrates  
*2<sup>nd</sup> Electronic System-Integration Technology Conference*, ESTC 2008, London, 1<sup>st</sup> - 4<sup>th</sup> September 2008, ISBN 978-1-4244-2814-4, p. 339-346, doi: 10.1109/ESTC.2008.4684372

J. Kita, E. Gollner, R. Moos:  
Laser Processing of Materials for MCM-C Applications  
*2<sup>nd</sup> Electronic System-Integration Technology Conference*, ESTC 2008, London, 1<sup>st</sup> - 4<sup>th</sup> September 2008, ISBN 978-1-4244-2814-4, p. 149-154, doi: 10.1109/ESTC.2008.4684341

M. Bąk, M. Dudek, A. Dziedzic, J. Kita:  
Chosen electrical and stability properties of laser-shaped thick-film and LTCC inductors  
*2<sup>nd</sup> Electronic System-Integration Technology Conference*, ESTC 2008, London, 1<sup>st</sup> - 4<sup>th</sup> September 2008, ISBN 978-1-4244-2814-4, p. 101-104, doi: 10.1109/ESTC.2008.4684332

R. Moos, J. Kita:  
Ceramic Multilayer Gas Sensors - an Overview  
*XXXI Int'l Conference of International Microelectronics and Packaging Society*, Krasiczyn, Poland, 23.-26.9.2007, ISBN 978-83-917701-4-6, p. 75-82

E. Miš, A. Dziedzic, T. Piasecki, J. Kita, R. Moos:  
Thick-Film and LTCC Microcapacitors  
*XXXI Int'l Conference of International Microelectronics and Packaging Society*, Krasiczyn, Poland, 23.-26.9.2007, ISBN 978-83-917701-4-6, p. 401-404

J. Kita, R. Moos:  
Application of Metallo-organic Pastes on LTCC Substrates  
*European Microelectronics and Packaging Conference EMPC 2007*, June 17-20, 2007, Oulu, Finland, p. 364-368

J. Kita, R. Moos:  
Heaters for LTCC-Sensors Made of Resinate Pastes

Proc. of 2007 IMAPS/ACerS, 3<sup>rd</sup> International Conference on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT), Denver, Colorado, 23.4-26.4.2007

Anwendungen der keramischen Mehrlagentechnologie in der Gassensorik - eine Übersicht.

R. Moos, J. Kita: *Materialica-Kongress „Von funktionskeramischen Materialien zu innovativen Produkten“*, München, 10.10.-11.10.2006

E. Gollner, J. Kita, R. Moos:

Frequency-tripled Nd:YAG-laser in thick-film and LTCC applications

Proceedings of XXX International Conference of International Microelectronics and Packaging Society, Krakow, Poland, 24.-27.9.2006, p.147-152

J. Kita, F. Rettig, R. Moos:

Integration of Fired Ceramics on LTCC Structures - Feasibility Study

EMPS 2006, 4th European Microelectronics and Packaging Symposium, Terme Catez, Slovenia, May 21 - 24, 2006, p.51-55

J. Kita, F. Rettig, R. Moos, K.-H. Drüe, H. Thust:

Hot-Plate Gas Sensors - Are Ceramics Better?

*Int. J. Appl. Ceram. Technol.*, **2**, 383-389 (2005), doi: 10.1111/j.1744-7402.2005.02037.x

F. Rettig, M. Wickles, J. Kita, R. Moos:

Anwendbarkeit von kommerziellen LTCC-Materialien für Gassensoren

*cfi/Ber. DKG*, **82** (13), 197-200 (2005)

J. Kita, F. Rettig, R. Moos:

Cofiring von LTCC Strukturen mit gebrannten Keramiken

*cfi/Ber. DKG*, **82** (13), 193-196 (2005)

K. Sahner, M. Wickles, D. Schönauer, F. Rettig, A. Roosen, R. Moos:

Strontium aluminate: a novel tape material for HTCC gas sensors

*cfi/Ber. DKG*, **82** (13), 170-173 (2005)

J. Kita, F. Rettig, R. Moos, K.-H. Drüe, H. Thust:

Laser forming of LTCC Ceramics for Hot-Plate Gas Sensors

*J. Microelectronics and Electronic Packaging*, **2**, 14-18 (2005)

J. Kita, F. Rettig, R. Moos:

A Novel Method of Fabrication of Mixed LTCC-Solid Ceramic Systems

Proc. of European Microelectronics and Packaging Conference EMPC 2005, June 12-15, Brugge, Belgium, p. 406-409

J. Kita, R. Moos:

Anwendung der LTCC-Technologie in der Mikroelektronik und Mikrosystemtechnik.

In Kriegesmann J. (Hrsg.), DKG-Handbuch Technische Keramische Werkstoffe, Kap. 3.6.1.3, Fachverlag. Deutscher Wirtschaftsdienst, 2004

J. Kita, F. Rettig, R. Moos, K.H. Drüe, H. Thust:

Laser Forming of LTCC ceramics for Hot-Plate Gas Sensors

Proceedings of XXVIII International Conference of International Microelectronics and Packaging Society, Wroclaw, Poland, 26.-29.9.2004, p.287-292