



Arbeitskreis Thermophysik in der GEFTA

| Measured Value | Method/Apparatus | Temperature °C | Material/Sample Size in mm/ml | Additional Information | Contact | Institute | e-mail | WWW |
|----------------|---|----------------|---|--|------------------------------------|------------------------------------|--|---------------------------------|
| misc. | thermogravimetry TG + simultaneous DSC (DTA), FTIR, MS | - 160 ... 1600 | solids, powders, pasts, melts, liquids, m: < 5g | QMS, FTIR material transition phenomena melts, liquids, solidifaction & densifaction chemical reaction analysis process design (debinding ...) thermokinetic & kinetically based FEM | Dr.-Ing. Wolfgang Hohenauer | Austrian Institute of Technology | wolfgang.hohenauer@ait.ac.at | www.ait.ac.at |
| misc. | thermogravimetry TG + simultaneous DSC (DTA), FTIR, MS | - 160 ... 1600 | solids, powders, pasts, melts, liquids, m: < 5g | QMS, FTIR material transition phenomena melts, liquids, solidifaction & densifaction chemical reaction analysis process design (debinding ...) thermokinetic & kinetically based FEM | DI (FH) Daniel Lager MSc | Austrian Institute of Technology | daniel.lager@ait.ac.at | www.ait.ac.at |
| misc. | heating microscope | RT ... 1300 | solids, powders 3 x 3 x 3 | | Stephan Vidi | ZAE Bayern | stephan.vidi@zae-bayern.de | www.zae-bayern.de |
| misc. | thermogravimetry TG + simultaneous DSC (DTA) | RT ... 1500 | solids, powders, pastes, melts, liquids Ø: 7 h: 7 m: 500mg | | Stephan Vidi | ZAE Bayern | stephan.vidi@zae-bayern.de | www.zae-bayern.de |
| misc. | speed of sound pulse-echo-apparatus | 0 ... 250 | liquids | up to 100 MPa | Prof. Dr. Stephan Kabelac | HSU Hamburg | kabelac@hsu-hh.de | www.hsu-hh.de/ thermodynamik |
| misc. | electrical resistivity by pulse heating | RT ... 1500 | solids Ø: 4 h: 50 | | Dr. Erhard Kaschnitz | Österreichisches Gießerei-Institut | erhard.kaschnitz@ogi.at | www.ogi.at |
| misc. | thermogravimetry TG + simultaneous DSC (DTA) | RT ... 1500 | powder, pastes m: 0.1 ... 10 g | air, argon ... | Alois Triessnig Gerhard Urbanek | RHI AG TC-Leoben | alois.triessnig@rhi-ag.com / gerhard.urbanek@rhi-ag.com | www.rhi-ag.com |
| misc. | simultaneous thermogravimetry - differential thermal analysis - evolved gas analysis with MS and FTIR | 20 ... 2000 | solids, powders, liquids Ø: 4 ... 55 h: 1 ... 55 | gas transfer via skimmer coupling, orifice or capillary system, weighted sample 1mg ... 500g | Dr. Tim Gestrich | Fraunhofer IKTS Dresden | Tim.Gestrich@ikts.fraunhofer.de | www.ikts.fraunhofer.de |
| misc. | Seebeck coefficient and electrical conductivity | RT ... 1000 | solids | | Jan König | Fraunhofer IPM | jan.koenig@ipm.fraunhofer.de | www.ipm.fraunhofer.de |
| misc. | Seebeck coefficient and electrical conductivity | RT ... 400 | thin films | | Jan König | Fraunhofer IPM | jan.koenig@ipm.fraunhofer.de | www.ipm.fraunhofer.de |
| misc. | Fluid-fluid miscibility Viscosity Desity Vapor pressure, etc. | -60 ... 90° | liquids | up to 100 bar | Dr. Steffen Feja | ILK Dresden gGmbH | steffen.feja@ilkdresden.de | www.ilkdresden.de |
| misc. | Fluid-fluid miscibility, density, viscosity vapor pressure | -40...90 | liquids | pressure 0..100 bar | Dr. Steffen Feja | ILK Dresden gGmbH | steffen.feja@ilkdresden.de | www.ilkdresden.de |



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|---------------------------------------|------------------|---------------------------|---|--|---------------|---|-----------------------------|-----------------------|
| Force, temperature, thermal expansion | Gleeble | RT ... liquefied material | Every conducting material Various sample sizes (sheet metal, round stock, square bar material,...) | CCT Diagramm Hot tensile test, uniaxial compression test, Welding Process Simulation, thermal fatigue, thermal/mechanical fatigue | Dr. Dirk Helm | Fraunhofer Institut für Werkstoffmechanik IWM | dirk.helm@iwm.fraunhofer.de | www.iwm.fraunhofer.de |