



Working Group Reinforcement of Ceramic Materials



Date: 3rd of March 2023
Address: Schunk Kohlenstofftechnik GmbH, Rodheimer Str. 59, 35452 Heu-
chelheim, GER
Moderation: Prof. Dr. Dietmar Koch



At this working group meeting, the HOMAS consortia will present the results from the completed collaborative research projects.

Program

09:00 Welcome, coffee and snacks

09:15 Welcome and introduction
Prof. Dr. Dietmar Koch, Universität Augsburg
Denny Schüppel, Ceramic Composites

09:30 doMiGat – Presentation of the results of the joint research project
Dense oxide ceramic CMC components for micro gas turbine applications

Coating of OCMC parts with complex shape
G. Barroso, R. Wagner, M. Müller, all Rauschert | A. Rüdinger, Fraunhofer ISC-HTL

Machining of OCMC parts for micro gas turbines
T. Neuwald, Fraunhofer IPK | J. Mundstock, Euro K | R. Wagner, G. Barroso, Rauschert | M. Bohlender, Gustav Gerster

Developments for high density OCMC
A. Rüdinger, Fraunhofer ISC-HTL | J. Mundstock, Euro K | M. Müller, Rauschert | M. Bohlender, Gustav Gerster

11:00 Coffee Brake

11:15 CMC TraTurb – Presentation of the results of the joint research project
CMC support structures in the hot gas section of gas turbines

A continuum damage model for CMC materials
Claudio Findeisen, Jörg Hohe, Fraunhofer IWM

SiC/SiC materials for turbine application (prepreg route)
Johanna Schmidt, Schunk

Increasing the SiC matrix content of melt-infiltrated SiC/SiC CMC & Design of attachment concepts for SiC/SiC turbine components
Fabia Süß, Sandrine Hönig, Martin Frieß, Linda Klopsch, all DLR-BT

12:45 Lunch Brake

13:30 **CMC TurbAn – Presentation of the results of the joint research project**

CMC optimization for turbine applications

Title to be defined

Kay Jäger, BJS Ceramics

Development of oxidic CMC materials and feature patterns based on pressing technique and low cost fabrics

Arne Rüdinger, Liviu Toma, Peter Vierhaus, Sabine Olbrich, all Fraunhofer ISC-HTL

SiC/SiC materials for turbine application (preform route)

Johanna Schmidt, Schunk

Development of OFC material suitable for application in turbine engines

Lukas Zulauf, Schunk

Optimisation of CVI fibre coating thickness in melt infiltrated SiC/SiC CMCs & Development of environmental barrier coatings (EBC) for turbine applications

Fabia Süß, Linda Klopsch, all DLR-BT | Ronja Anton, Vito Leisner, Uwe Schulz, all DLR-WF

15:00 **Diskussion**

15:30 **End of the AK**

Overall Program

Wednesday, 1st of March 2023

13:00 –
16:00 **PhD working group**

19:00 –
open end **Dinner / City Center**

Thursday, 2st of March 2023

08:30 –
10:00 **General Meeting CU West**

10:30 –
18:15 **Innovation Day: CMC + CFRP in the energy conversion & storage**

18:15 –
20:00 **Dinner / Schunk**

20:30 –
open end **Get together / City Center**

Friday, 3rd of March 2023

09:00 –
15:00 **Working Group CMC**

15:30 **End of the March Meetings @ Schunk**