

MORE-Freiberg e.V.



Bridging of Material Disciplines for Refractory Innovation

5. Mitgliederversammlung
Freiberg, 30.09.2009

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MORE-Freiberg e.V.



2004

Meeting of Refractory Experts Freiberg e.V.
– MORE-Freiberg e.V.

30 refractory companies

2005

Federation for International
Refractory Research and Education

7 Universities worldwide / 11 refractory companies



2006

Guest Professorship at
Wuhan University of Science and Technology, China



2009

Institute of Ceramic, Glass and Construction Materials
TU Bergakademie Freiberg

Master course with a specialisation of
“High Temperature Applications – Refractories”



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Managing board



Prof. Dr.-Ing. habil. Ch.G. Aneziris

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Prof. Dr.-Ing. Th. A. Bier

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Member of the Managing Board

Dipl.-Ing. A. Ansorge

Member of the Managing Board

Dr.-Ing. Ch. Wöhrmeyer

Member of the Managing Board

Activities 2008/2009



Projects:

- Stopper development (*Drache*)
- Filter development (*Vesuvius*)
- Tribology of Ceramics against Si (*Joint Solar*)
- Carbon bonded refractories for pig iron (*EKW*)

Presentation of MORE:

- Journal „Refractory Manual 2008 “
- Journal „Refractory World Forum 2009“
- International Colloquium on Refractories, Aachen 2008 + 2009
- UNITECR´09, Brazil

Training course for students:

- LWB
- Refratechnik

Co-Organisation:

- XVI. International Conference on Refractories, Prag 2008

Scholarships / Awards:

- 3 Students, 1 Post Doc
- 1 diploma thesis at Krosaki/Japan

Activities 2008/2009



一緒に耐火物を勉強しましょう！ ドイツからの研修生ご紹介

5月26日から、ドイツのフライベルク大学からSara Gruetzner(サラ)さんが[研]に研修に来られています。

研修が始まって2週間は古き良き趣がある八千代寮(豊)に、そして2週間後から新しくなった紅梅寮に移られています。ドイツでは洗濯機の水の温度調整が出来るそうで、日本の洗濯機でお湯が出ないことにカルチャーショックを受けていたとのこと。

水泳、乗馬が得意で、登山に参加されるなど(11ページ「グループ・アラ・カルト」参照)、とてもアクティブな女性です。
[一研C]福原 知里



研修中の1枚

■サラさんより自己紹介

こんにちは。Sara Gruetznerです。ドイツのフライベルク工科大学の学生で、22歳です。ドイツの東の地方にあるドレスデンから来ました。

8月6日までこちらの会社(黒崎播磨)で研修予定です。研修期間中は修士論文制作に取り組みます。アルミナグラファイトとナノ技術に関するいくつかの実験をする予定です。

よろしくお願ひします！



左より[一研C]岩元さん、サラさん、[一研C]安部さん



6月6日サラさん誕生日会 門司港にて



グリーンパークにて 馬と触れ合ってこの笑顔！

Highlights at IKGB



Highlights at IKGB in the Area of Refractories



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Highlights at IKGB



Professorship of Ceramics

Project Budget (in Mio. EUR) 1.4 (2007) → 3.0 (2009)

Scientific Staff: 25 (2007) → 32 (2009)

Internal PhD's: 13

External PhD's: 6

Honorary Prof.: 2

Completed PhD's 08/09: 6

Completed Diploma Thesis 08/09: 14

Reviewed papers (impact factor >1.5): 14

Reviewed papers (impact factor 0.8 - 1): 16

Proceeding contributions: 23

Granted Patents 08/09: 2

Patent applications 08/09: 9



New Projects at IKGB

Projects financially supported by the DFG



Priority Program SPP 1418:

Refractories - Initiative to Reduce Emissions - "FIRE"

Program Coordinator: Prof. C.G. Aneziris

IKGB: 4 running Subprojects



Collaborative Research Center SFB 799:

Design of tough, transformation-strengthened composites and structures based on Fe-ZrO₂

Coordinator: Prof. H. Biermann

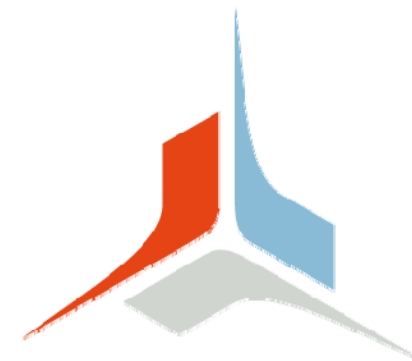
Deputy Coordinator: Prof. C.G. Aneziris

IKGB: 3 running Subprojects

DFG – Normal Approach:

IKGB: 3 running projects

TOTAL: 10 running DFG-projects



New Projects at IKGB



Projects financially supported by the BMBF

Environmental friendly Material Design and Engineering by Bridging of Ceramic Disciplines

PEHA (BMBF – joint research project No. 03X3527):

Alkali-resistant materials for the cement industry

Co-partner: Calsitherm Verwaltungs GmbH, Refratechnik Cement GmbH,
Lafarge Zement Karsdorf GmbH, Schöler + Bolte, Witten,
Fraunhofer IKTS Dresden

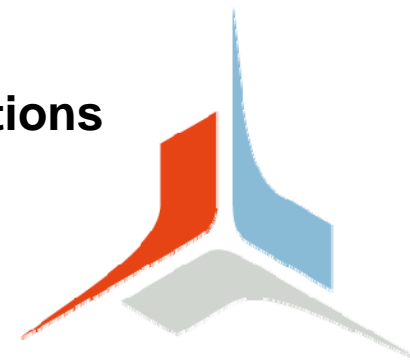
IKGB: 1 Subproject

DER (BMBF – joint research project):

Refractories in reduced atmospheres for energy applications

Co-partner: Fraunhofer IKTS Dresden, Forschungszentrum Jülich,
RWTH Aachen, TU Dresden, DBFZ Leipzig, IBExU,
MPI, Siemens FGT, Choren, RWE

IKGB: 1 Subproject



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New Projects at IKGB



Projects financially supported by the industry

**Environmental friendly Material Design and Engineering
by Bridging of Ceramic Disciplines**

High Temperature Materials and Applications

- Siemens: High temperature applications
- Refratechnik: Carbon bonded refractories
- Magnesita: Carbon bonded refractories
- Seram: Transport of Al-melts
- Vesuvius: Filters for Metal-Melt-Filtration
- Polysius: Novel Heat Exchanger
- Wildeboer: Thermal Insulation

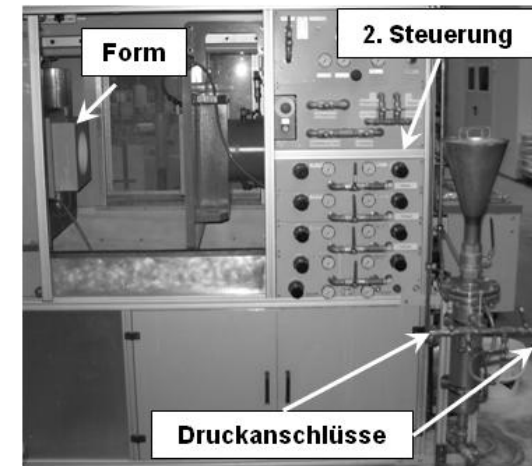
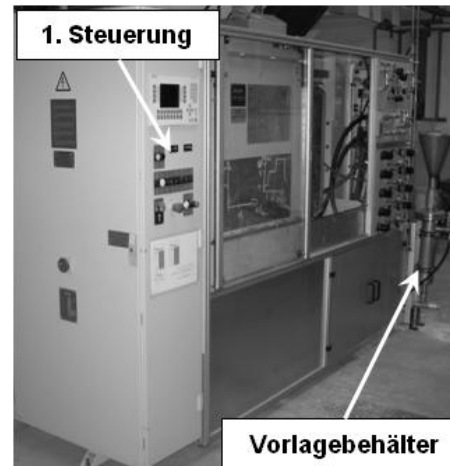
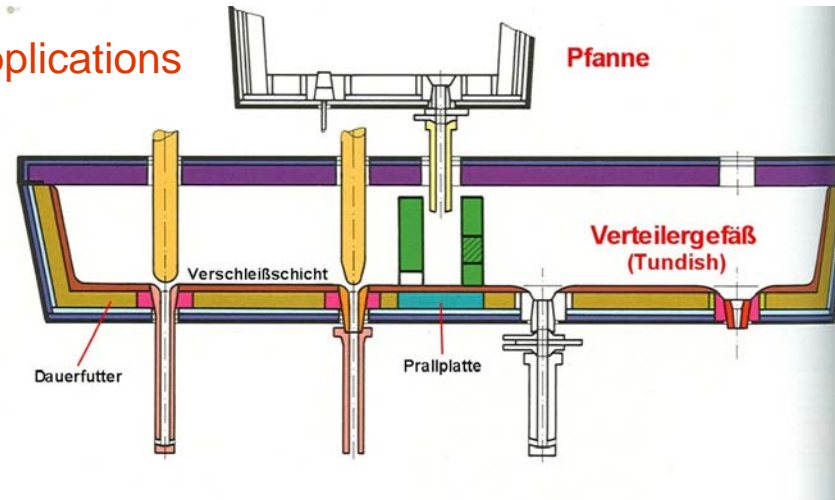
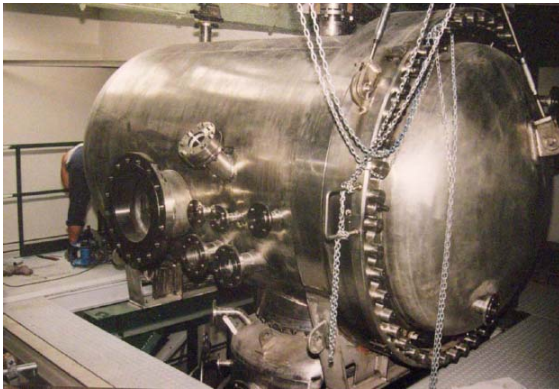


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New Facilities at IKGB



A. Steel Casting Simulator for Refractory Applications

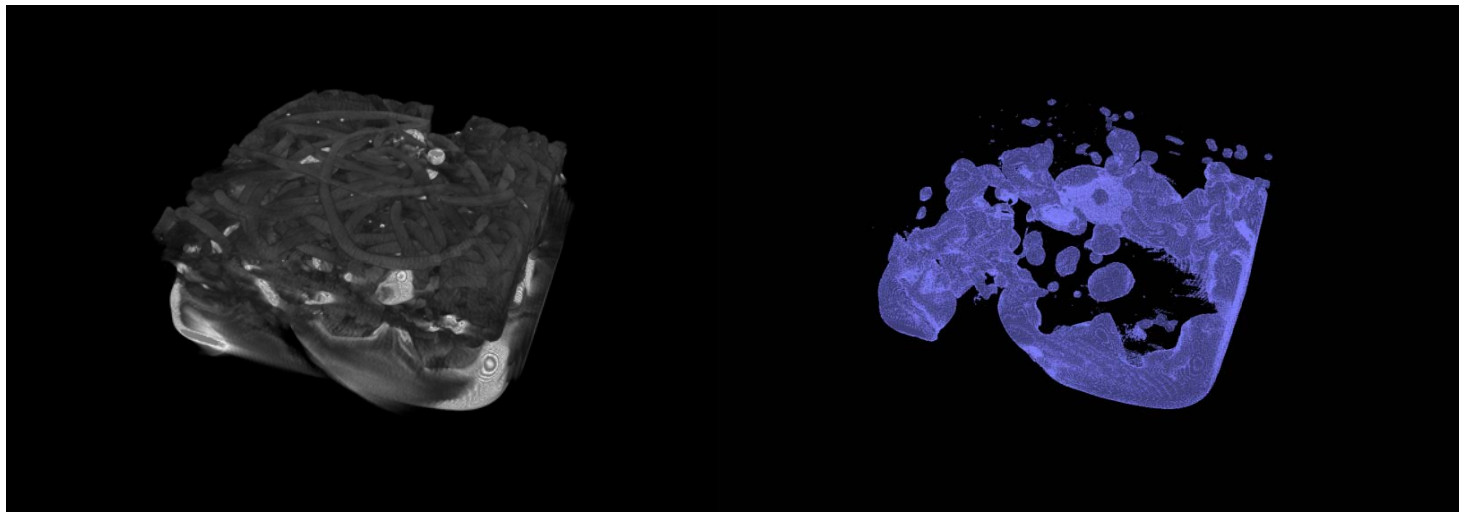


B. Pressure Slip Casting of coarse grains

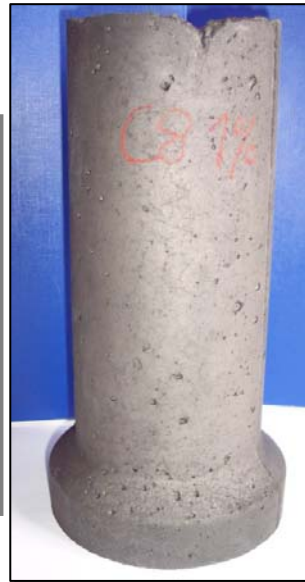
New Facilities at IKGB



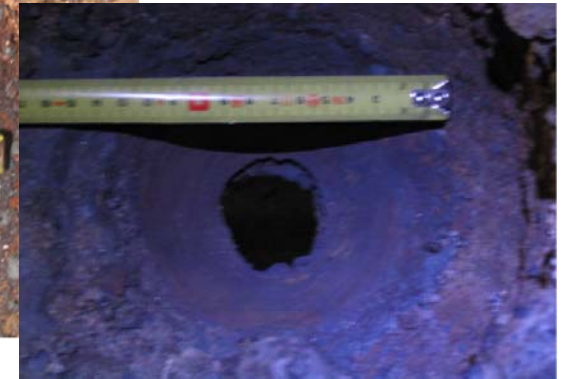
X-ray microfocus computed tomography



Focuses at IKGB



C – Castables, MgO-C – Castables



Electro – Anti-Clogging



**Alkali resistance
Material and System development**



**CIP
Stopper development**



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Invitation



UNITECR´09

REFRACTORIES IN A SHIFTING GLOBALISED WORLD

13-16 OCTOBER 2009, SALVADOR BRAZIL

7 Contributions of IKGB

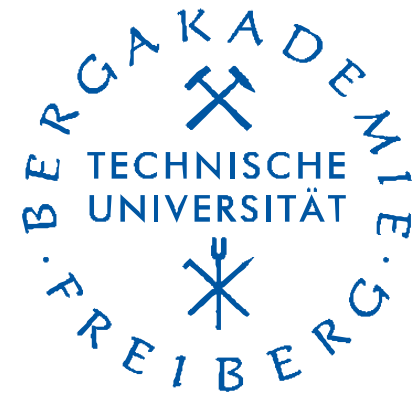
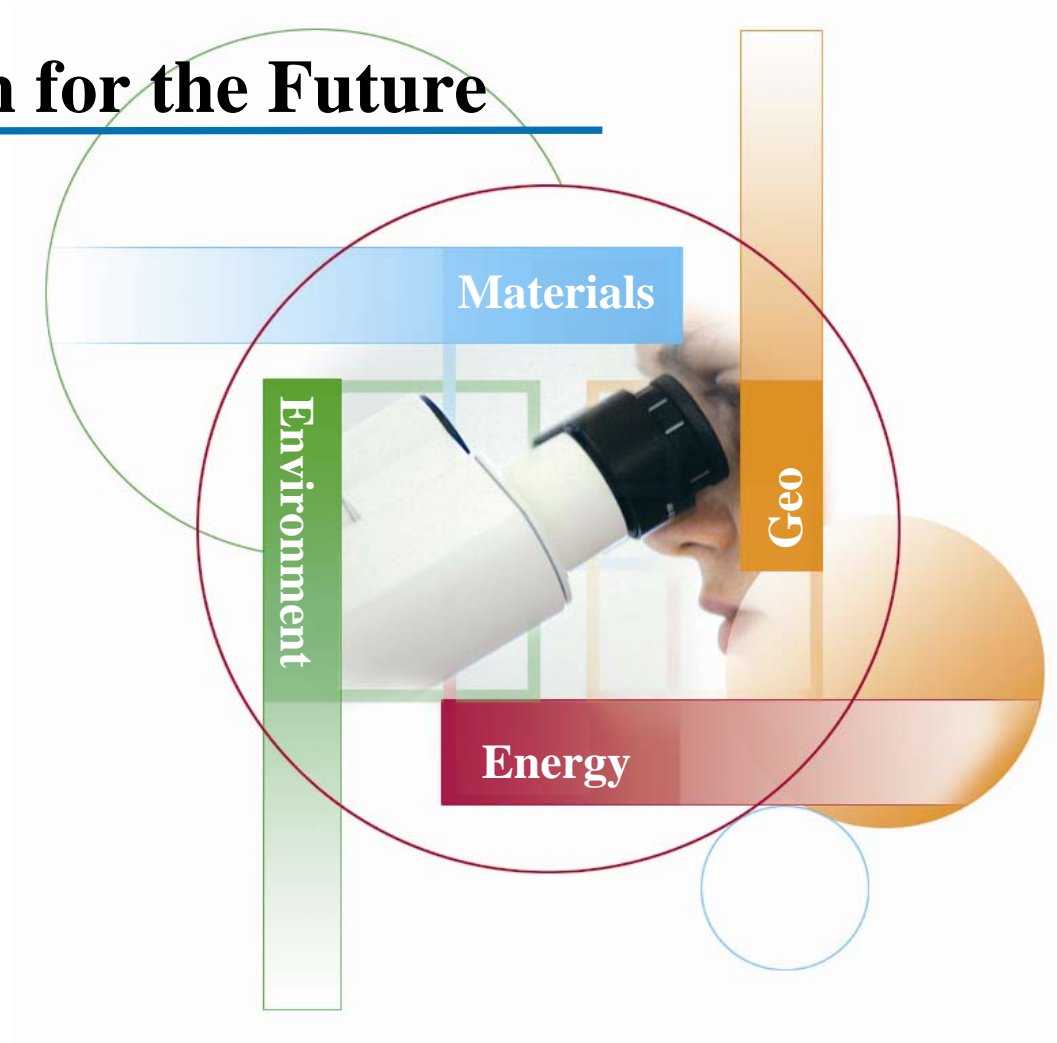


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Research for the Future



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