TENTATIVE PROGRAMME

- Carbon Resources and Industrial Importance (W. Frohs)
- Basic Reactions and Conversion Processes (S. Horn)
- Carbon Blacks - Manufacturing and Application (C. Vogler)
- Activated Carbon - Production and Application (K.-D. Henning)
- Carbonaceous Materials for the Electrolytic Production of Aluminum (F. Hiltmann)
- Carbonaceous Materials for the Basis Oxygen Furnace Process (H. Daimer)
- Manufacturing and Application of Graphite Electrodes for Steel Production (M. Christ)
- Fine grained Carbon and Graphite Materials (G. Rinn)
- Expanded Graphite and its Applications (M. Christ)
- Carbon Fibres and Carbon Fibres Reinforced Polymers (M. Heine)
- Carbon/Carbon - a Light Weight Material for High Temperature Applications (R. Weiß)
- Manufacturing and Application of Carbon and Graphite for Energy Storage (M. Wachtler)
- Graphene (N.N.)
- Nanoforms of Carbon - Manufacturing, Potential Application and Health Risks (W. Handl)
- SiC - Manufacturing and Application (A. Kienzle)
- Final Round-table Discussion with Lecturers and Attendees

(subject to modifications)

GENERAL INFORMATION

LANGUAGE

The course will be held in English.

SCHEDULE

The course is a two day event. It starts on Thursday, November 22, at 10:00 h, so that the morning can be used for travelling. Lectures will end at 18:30 h. There will be breaks for lunch and coffee and a joint dinner in the evening. On Friday, November 23, lectures start at 9:00 h. The seminar closes with the round table and lunch at 15:00 h.

VENUE

University of Augsburg
Universitätsstr. 1
D-86159 Augsburg

REGISTRATION

Please complete and return the enclosed form or contact:

DECHEMA Research Institute
Training dept.
P.O. Box 17 03 52
D-60077 Frankfurt am Main

Tel.: +49 69-7564-253/202
Fax: +49 69-7564-414
E-mail: gruss@dechema.de
E-mail: weber-heun@dechema.de
Internet: www.dechema-dfi.de

REGISTRATION FEE

705.- €

690,- € (personal DECHEMA members)

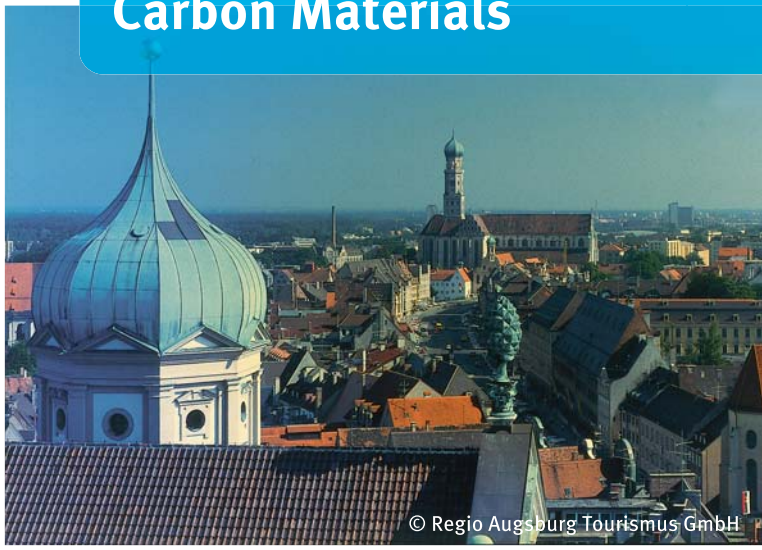
(incl. course materials, lunch and coffee breaks)

DECHEMA

INTENSIVE COURSE

22 - 23 November 2012
Augsburg / Germany

European Course on Carbon Materials



SCOPE AND CONTENT

Carbon, a key element of nature and vital component of life, has manifold and important technical applications in industrial chemistry, electrometallurgy, electrical engineering, the automobile and aircraft industries and high-temperature process technologies. It is also important for ceramic materials, communication techniques, energy storage, nuclear reactor technology and environmental protection. Carbon fibres and their composites have a key role in various fields of high technology, where light-weight structures with high-performance mechanical properties and high temperature resistivity are necessary. Examples of old and new forms of technical carbon are coke from coal and petroleum, natural and artificial graphite, carbon blacks, activated carbons, synthetic diamonds, fullerenes, and carbon nanotubes. At present the world production and consumption of technical carbon amounts to about 27 mio t p.a. (metallurgical coke and petroleum coke not included). The production value of these carbon products totals some 33 bill. € p.a.

The course gives an overview of the present state of industrial development, processing, manufacturing and application of carbonaceous materials. The subject will be introduced by a review of the resources and the importance of carbon, its raw materials and precursors with regard to technical, economical and environmental aspects. In addition the basic reactions and the fundamental conversion processes will be explained.

Overviews will be given on the manufacture and application of carbon and graphite as electrodes in primary aluminium and electro-steel production including the standardization of methods for testing the carbonaceous materials.

The production and application of activated carbon and carbon black are also included in the course. The major application fields of activated carbon are in water treatment, air purification, flue gas cleaning, gas separation, and as catalyst or catalyst support. Carbon blacks are used as active fillers and pigments. As application for natural graphite the production and uses of expanded graphite will be presented.

PURPOSE

The manufacturing, properties and application of carbon/carbon materials based on carbon fibres will be introduced. Moreover, a survey will be given on special graphitic carbon, based on fine-grained carbon and graphite. These materials are used in numerous modifications and applications, e.g. carbon brushes, seal rings and bearings, laboratory equipment and components for hot pressing and semiconductor processing. The properties and application of graphite in nuclear reactor technology will be presented.

For novel carbon forms such as CVD diamond, carbon nanotubes and amorphous carbon films, the current status of manufacture and industrialization will be discussed. Finally, the topic manufacturing and application of SiC will be introduced.

The course will be rounded off by a final discussion between lecturers and course participants.

PURPOSE

This event is intended as a refresher course for colleagues who are active in carbon technology. The course is also well suited for scientists and engineers who are newcomers in the field of carbon materials, including students in the fields of technical chemistry, chemical engineering and material science.

PRESENTATION

Most of the topics will be presented in lecture form. However, there will also be time for discussions. All aspects, remaining questions etc. will be summarized in a final round-table discussion with lecturers and participants.

HANDBOOK

On arrival at the course, each participant will receive a copy of the handbook containing all relevant figures and tables shown in the lectures and for each topic a selected list of references. The handbook is intended as a guide for the user after the course during his own work with carbon materials.

EXPECTED LECTURERS

M. Christ	SGL Carbon GmbH, Meitingen
H. Daimer	SGL Carbon GmbH, Meitingen
W. Frohs	SGL Carbon GmbH, Meitingen
W. Handl	hc-carbon, Nürnberg
M. Heine	SGL Carbon GmbH, Meitingen
K.- D. Henning	CarboTech GmbH, Essen
F. Hiltmann	SGL Carbon GmbH, Meitingen
S. Horn	Universität Augsburg, Augsburg
A. Kienzle	SGL Carbon GmbH, Meitingen
G. Rinn	Schunk Kohlenstofftechnik GmbH, Gießen
C. Vogler	Evonik Degussa GmbH, Köln
M. Wachtler	ZSW Baden-Württemberg, Ulm
R. Weiß	Schunk Kohlenstofftechnik GmbH, Gießen

(subject to modifications)

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Reply form
(Fax-No.: +49 69 7564-414)

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D-60077 Frankfurt am Main

Registration to the DECHEMA course 3113 **CM**
"European Course on Carbon Materials" Augsburg, 22-23 November 2012
Deadline for registration: 1 November 2012

Participant

Mrs ☐ Mr ☐ Title _____

Name _____

Surname _____

Company _____

Department _____

Street/POB _____

Code/Place _____

Phone/Fax _____ E-mail _____

Invoice address

Company _____

Department _____

Street/POB _____

Code/Place _____

I am a personal member of DECHEMA: ☐ yes ☐ no

The course fee amounts to € 705.- / € 690.- (personal DECHEMA members). Please do not transfer the fee before having received the final confirmation of participation by DECHEMA. If we receive a notice of withdrawal at least two weeks prior to the beginning of the course, the participation fee less 10% for administration expenses will be reimbursed. Thereafter, a reimbursement will not be possible.

_____ _____

Place, date signature + company stamp