

The University of Tokyo Global COE

School system at University in Germany and in the USA

Sebastian Lacher

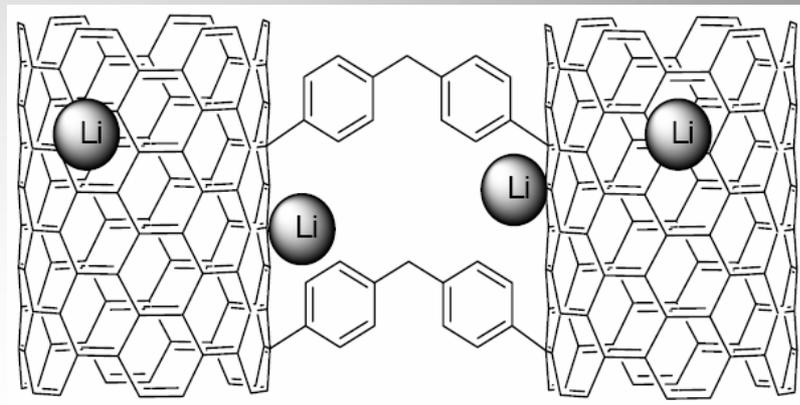
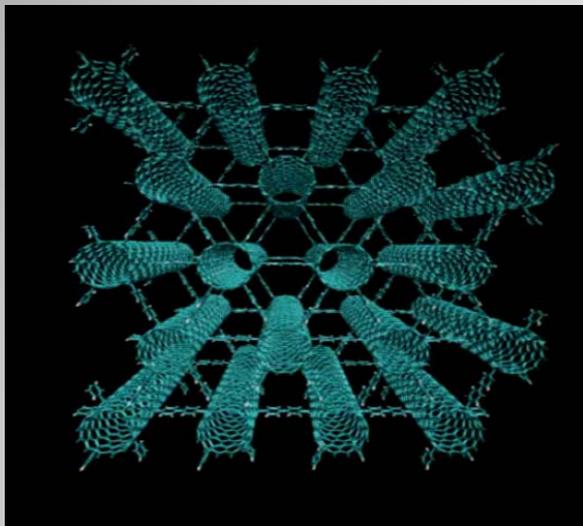
Institute of Organic Chemistry and Interdisciplinary Center for Molecular Materials (ICMM), Friedrich-Alexander Universität Erlangen-Nürnberg, Henkestrasse 42, 91054 Erlangen, Germany

Department of Chemistry, Center for Nanoscale Science and Technology, Rice University, 6100 Main Street, Houston, Texas

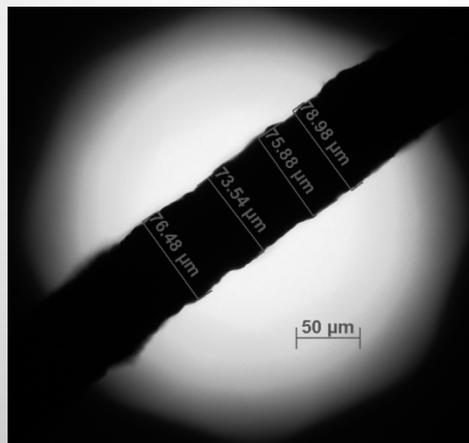


The figures, photos and moving images with  marks attached belong to their copyright holders. Reusing or reproducing them is prohibited unless permission is obtained directly from such copyright holders.

My research: Hydrogen Storage on CNT fibers



D = 51 μm



D = 76 μm

Overview of the German study system

Bachelor

- application at university, high school GPA important
- cost: 500 € per semester (\$725; 78,000 Yen) (depends on state)
- basic knowledge for the field of study (no major/minor).
- 6 semesters (3 years)
- exams are sat after each semester

Master

- application at university, Bachelor GPA important
- cost: 500 € per semester (\$725; 78,000 Yen) (depends on state)
- one major and two minors
- 3 semesters of lectures and 1 semester of research (master thesis)

Dr. rer. nat. (doctor rerum naturalium) / Dr.-Ing. (Doktor-Ingenieur)

Dr. rer.
nat. (3
years)

Master
(2 years)

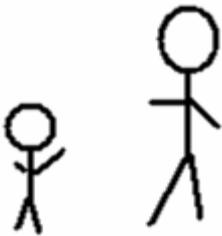
Bachelor
(3 years)



Graduate Programs

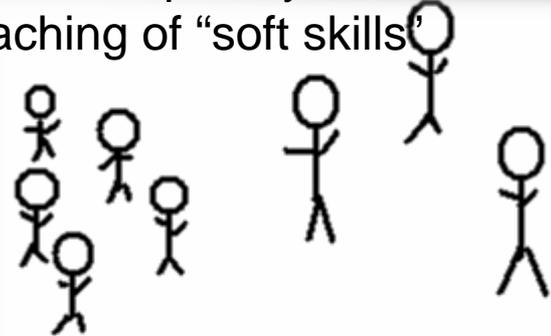
Independent research under supervision of a “Doktorvater”

- no central admission!
-> professor playing key role in getting accepted
- traditional way and most common in Germany
- no grad school or binding curriculum
- production of a doctoral thesis or dissertation is the core element of the doctorate
- students agree their topic with a supervising



Structured PhD-programs (International Postgraduate Programs)

- flexible admission for foreign applicants (e.g. with Bachelor's degree)
- English largely used in courses
- has a binding curriculum
- team-based doctorate (constant process of exchange with other doctoral students and supervisors)
-> interdisciplinary and international
- teaching of “soft skills”



doctoral programs in Germany are tuition-free

Application

traditional way

- find professor (publication, ask advisor...)
- contact professor by eMail or formal letter
-> brief description of your field, topic of interest, review of relevant experience, resume
- requirement: Master degree or similar

grad school

- central admission
- most programs have deadlines (1 – 2 years)
- Selection formalities differ, generally needed:
 - Written test
 - Selection interview
- requirement: Bachelor's degree

Additional Information:

<http://www.daad.de/deutschland/studienangebote/promotion/06546.en.html>



Overview of the US study system

Bachelor

- application at university, money important
- cost varies (good schools several \$10K per semester)
- basic knowledge for the field of study and general education requirement (major / minor)
- 8 semesters (4 years)
- exams are sat after each semester

Grad school

- GRE test scores are important (GRE, GRE subject)
- first two semesters are coursework (6 - 8 courses) with specific knowledge for the field of study
- exams after coursework
- rest of the time is about doing research in a group of a professor
- defense at the end

Grad
School
(4-5
years)

Course-
work

Bachelor
(4 years)



Lablife in USA / Germany

- plenty of space
- flexible time schedule
- teaching of soft skills (presentations, teaching...)



System in Japan compared to USA / Germany

