

German Nanotechnology Networking Model

Christiane Ziegler

Dep. of Physics, Nanotechnology Competence Center

Univ. of Kaiserslautern, Germany

Nanotechnology Centers of Competence

Aim:

- *Strengthening the German (industrial/economic) position*
- *Accompanying tasks: information of the public, education*

Funding:

- *Funds only for networking and accompanying tasks, not for research*

Nanotechnology Centers of Competence

Main Instruments:

- Initiation of working groups for special tasks
- Transfer to industrial applications within projects
- Foundation of new companies, support of young companies
- Internet communication system
- Data base for publications, competencies etc.
- Organization of seminars, workshops, and conferences
- Press campaigns, internet presentations, fair exhibitions

Situation till 1.10.2003

6 (7) Nanotechnology Centers of Excellence (=Networks)

100% funding from German ministry

- 1. Production and use of lateral nanostructures (Aachen) (till 30.9.2001)**
- 2. NanOp - applications of nanostructures in the field of optoelectronics (Berlin)**
- 3. Functional ultra-thin films (Dresden)**
- 4. Nanotechnology: Functionality by means of chemistry (Kaiserslautern/Saarbrücken)**
- 5. Ultra-precise surface treatment (Braunschweig)**
- 6. Nanoanalytics (Münster/Hamburg/München)**
- (7. Nanomaterials) (Karlsruhe)**

Situation now

9 Networks, 50% funding from German ministry, 50% from other sources

CC-NanoChem (Saarbrücken)

CC-NanoBioTech (Kaiserslautern, two federal states and industry)

CC-Nanoanalytik (Münster, CenTech GmbH)

CC HanseNanoTec (Hamburg, federal state, university, industry)

Excellence Network in Nanobiotechnology (Munich, federal state)

Functional ultra-thin films (Dresden, Fraunhofer)

Ultra-precise surface treatment (Braunschweig)

**NanOp-applications of nanostructures in the field of optoelectronics
(Berlin, federal state)**

(Nanomaterials, Karlsruhe)

Why a New Structure?

Interface between nanotechnology and biology is a topical issue

In the federal states of Rhineland-Palatinate and Saarland there are strong regional competencies:

NanoBioNet e.V. (society)

Nano+Bio Center at K-Tech (technology center)

INM Saarbrücken (chemical nanotechnologies)

FhG IBMT St. Ingbert (bio-medical technologies)

many small companies

But: Many actors, many young structures, so that synergies are not fully optimized

Therefore: Experience of CC-NanoChem will be used to develop an effective regional cluster which is internationally competitive

Network Structure



Members of CC-NanoBioTech = Members of NanoBioNet e.V.



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CC-NanoBioTech (1)

- Joining the competencies of NanoBioNet e.V., tp21, IMG, Nano+Bio Center at K-Tech and ZFUW
- Structure for 3 years, then integrated into NanoBioNet e.V.
- Members of NanoBioNet e.V. are automatically members of CC-NanoBioTech

Generation of innovative ideas: interdisciplinary dialog

- New study in Biophysics (TU Kaiserslautern)
- Nano+Bio Center at K-Tech, common research area for physicists and biologists
- Workshop NanoMed (with Dr. Jordan, Charité)
- interdisciplinary teaching and training courses

Dialog Science/Industry

- Trade fare presentation
- Consulting and contact
- Newsletter

CC-NanoBioTech (2)

Technology Transfer

- Technology platform (Nano+Bio Center at K-Tech)
- Money for pilot studies
- Support of SMEs in innovation management (tp21,IMG)

Interdisciplinary training, also on a European level

- Academic training: distance learning course on nanobiotechnology (ZFUW)
- Cooperation with Nano2Life, EU 6th Framework Network
- Technical training: Nanotechnology expert (NanoBioNet e.V.)

Standardization

Public Relations