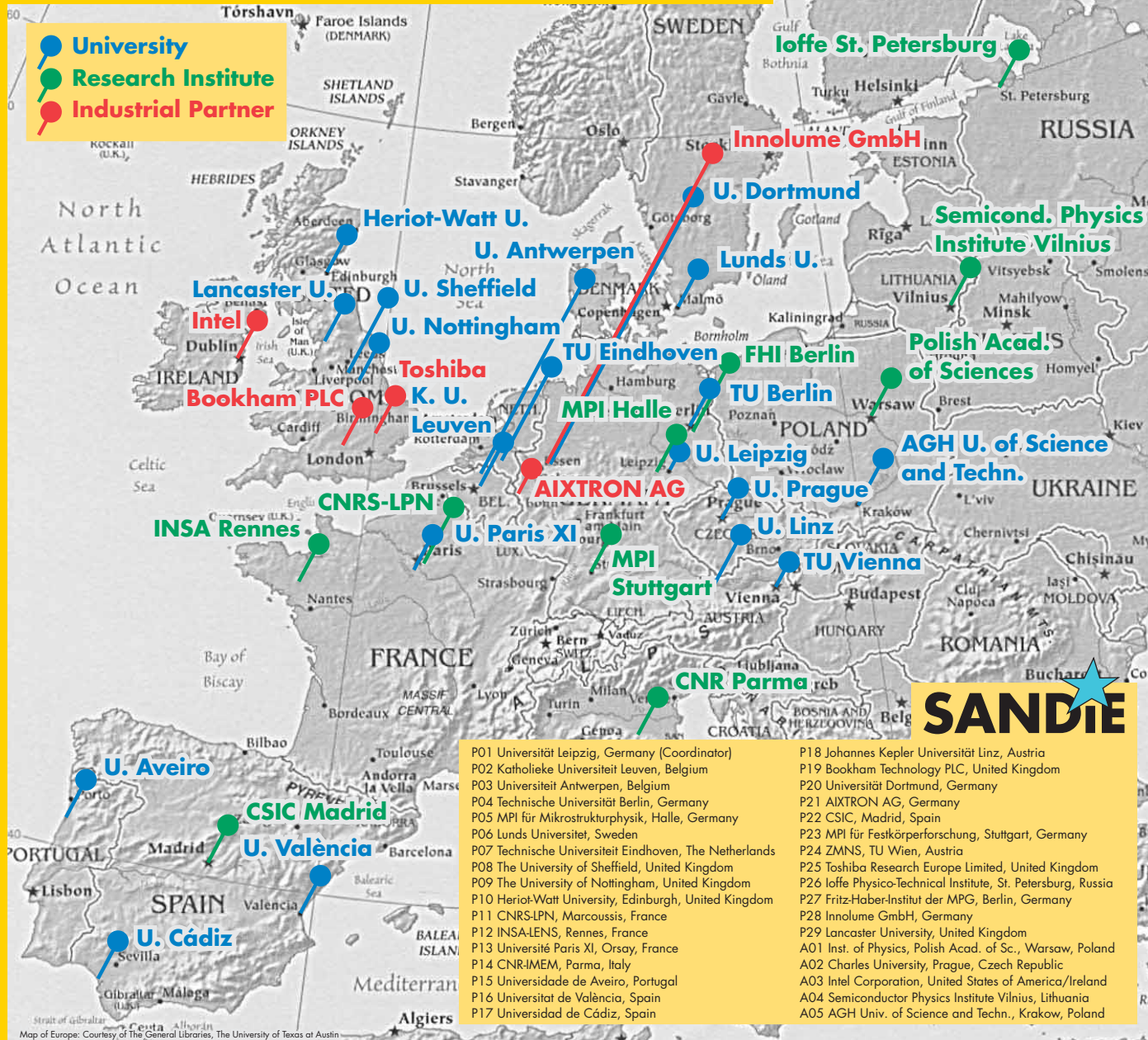


One Network of Excellence with 34 Partners in 15 Nations



Network of Excellence

SANDiE

**Self-Assembled semiconductor
Nanostructures for new Devices
in photonics and Electronics**

www.SANDiE.org



SIXTH FRAMEWORK PROGRAMME

The **SANDiE** Network of Excellence (**NoE**) is dedicated to the study of self-assembled nanostructures (**SAN**) and increases dialogue, exchange of expertise and access to infrastructure, thereby integrating European research resources.

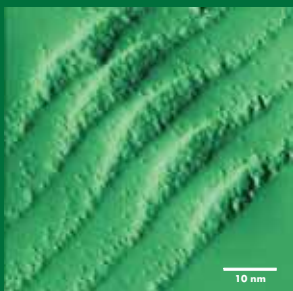
Importance for Europe

- Secure world-wide leading position in scientific field by overcoming fragmentation
- Specialized education and training relevant to future European industry needs
- Bidirectional know-how transfer
- ▶ World-wide leading position in novel products
 - Creation of jobs and generation of income tax
 - Improvement of environment (energy savings)
 - Improvement of living conditions in Europe

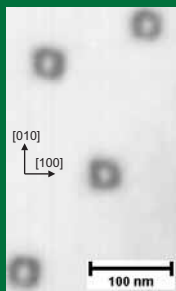
Integration of ...

- Human resources (excellence of people)
 - ▶ Exchange, PhD program
- Facilities
 - ▶ Equipment, Software
- Education
 - ▶ Workshops, Schools, Technical Training
- Exploitation
 - ▶ Start-ups, Incubators, IPR

Cross-sectional view of a vertical stack of quantum dots



Plan-view image of quantum dots



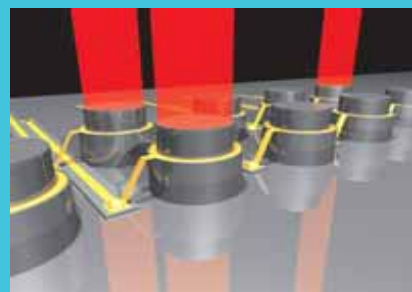
Scientific Research Fields

- SAN for long-wavelength laser emission
- SAN for inter-sublevel transitions
- SAN for single photon communication
- Novel SAN (structures, materials)
- Simulation of SAN (growth, physics, devices)
- Directed assembly of SAN
- Nanospintronics with SAN
- etc.

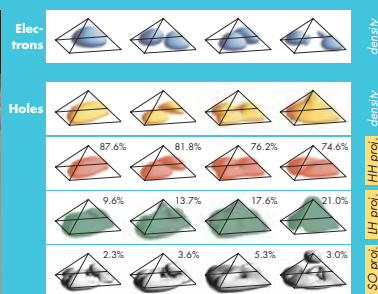
Spreading of Excellence

- Dissemination
 - Publications, Conferences, Intranet
- Outreach to new members and Eastern Europe (NIS)
- Outreach to general public
 - Awareness for nanotechnology
 - Safety of SAN
- Contribution to standards by industrial partners

Model of a vertically emitting laser



Model of electron/hole wave-functions



SANDiE

UNIVERSITÄT LEIPZIG

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