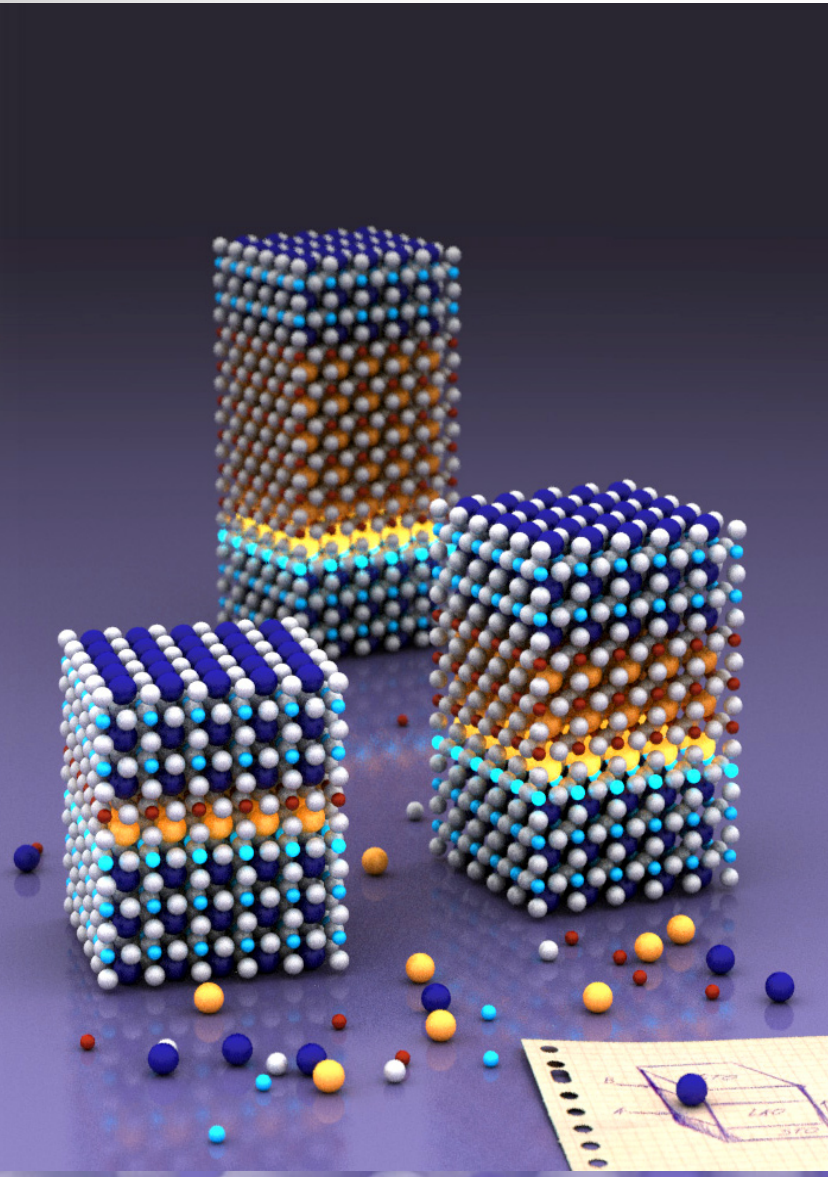
UNIVERSITY OF TWENTE.

Fysische Materiaalkunde



Alexander Brinkman

Quantum Transport in Matter (QTM)

MESA+
INSTITUTE FOR NANOTECHNOLOGY

Fysische Materiaalkunde

Bachelorvak *Fysische Materiaalkunde*

(Hans Hilgenkamp & Alexander Brinkman)

Ter voorbereiding op Nano-Electronic materials track:

Surfaces and Thin Layers

(Wormeester)

Theoretical Solid State Physics

(Kelly)

Nanophysics

(Zandvliet, Brocks, Golubov, Li)

…en ter algemene technisch-fysische ontwikkeling!

Nano-Electronic materials cluster

PIN: Physics of Interfaces and Nanomaterials (Zandvliet)

CMS Computational Materials Science (Kelly, Brocks, Bokdam)

ICE: Interfaces & Correlated Electron systems (Hilgenkamp)

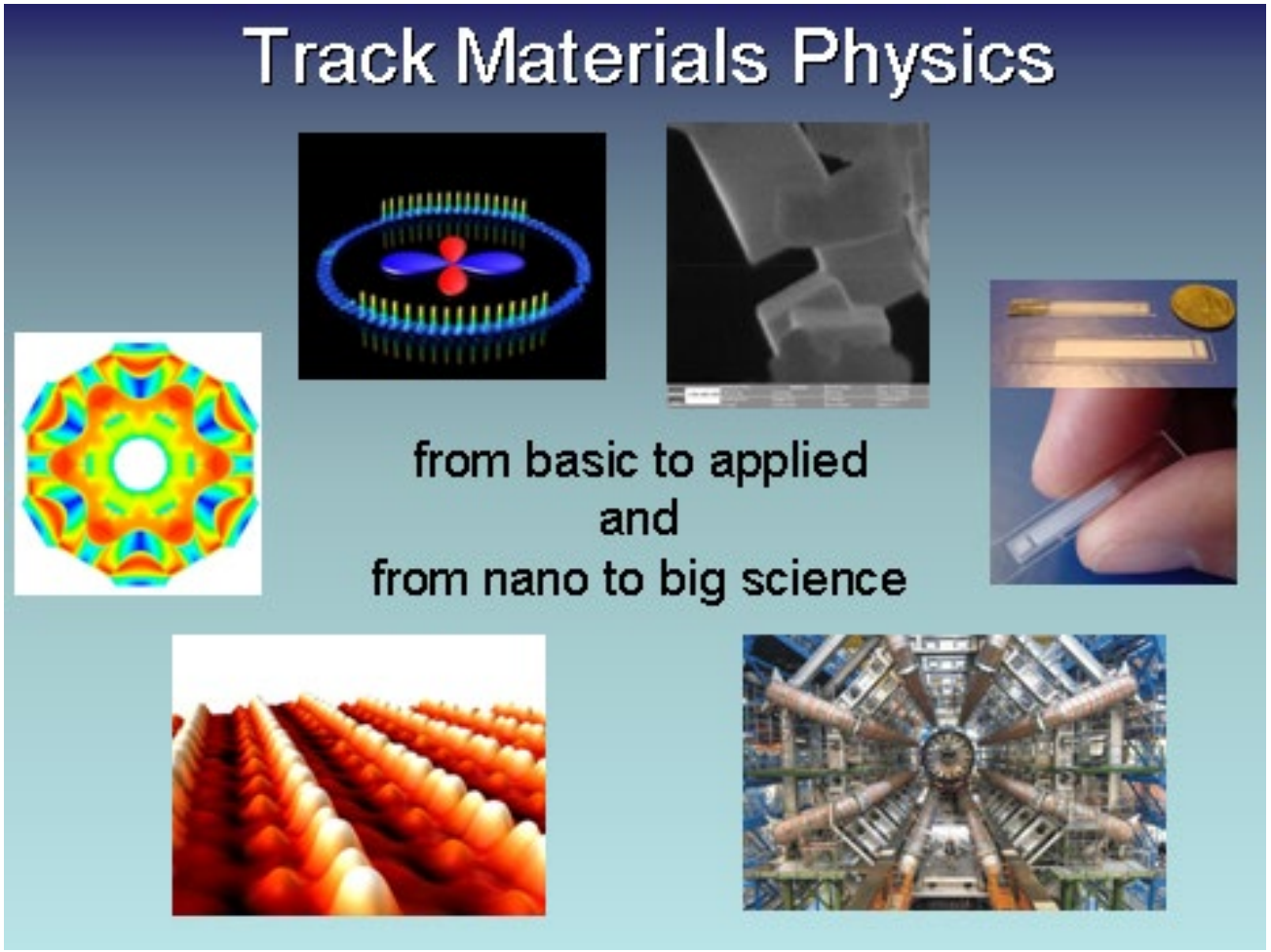
QTM: Quantum Transport in Matter (Brinkman)

IMS: Inorganic Materials Science (Rijnders, Huijben, Koster, Morales, Saive)

NE: Nano Electronics (Zwanenburg, vd Wiel)

XUV: Extreme UV lithography (Ackermann)

CCP Computational Chemical Physics (Filippi, Leppert)



Topic examples:

Solar cells

Superconductivity

Nuclear fusion

Hydrogen technology

Neuromorphic computing

Satellite sensors

Beyond Moore electronics & storage

CERN magnets

Thin film technology

Particle detectors

Battery technology

Quantum computation

etc. …

Opzet van het vak FMK

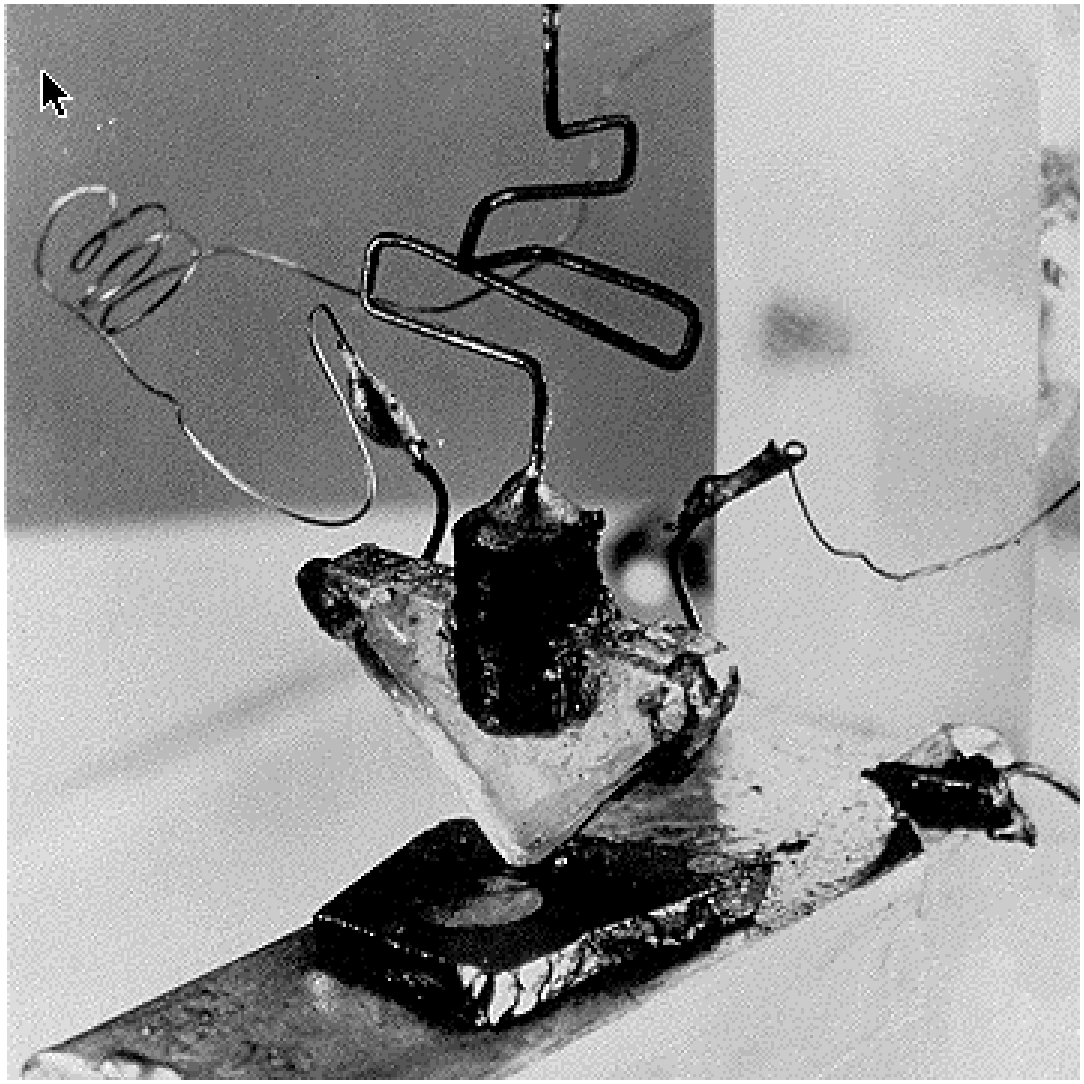
Hoorcolleges & gastsprekers (kunst of industrie)

Consultancy opdracht + presentatie

- bv. Hoe werkt google glass?
- bv. Hoe maak je een touch-screen?

Cursus elektronenmicroscopie

Cursus dunne-filmlab/cleanroom



The modern MOS-FET transistor