

Institute of Solid State Physics

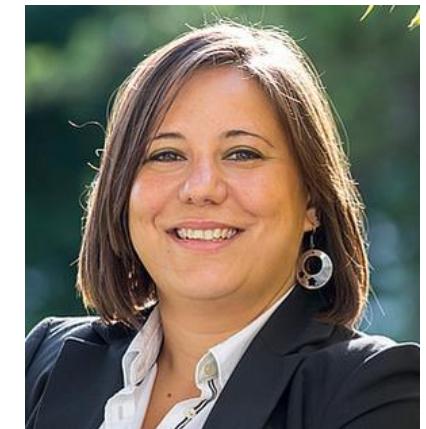
**Organic Semiconductors
Machine learning in Materials Design
Robotic skin
Medical Sensors
Paper strength
Defects in semiconductors**

<http://www.if.tugraz.at>

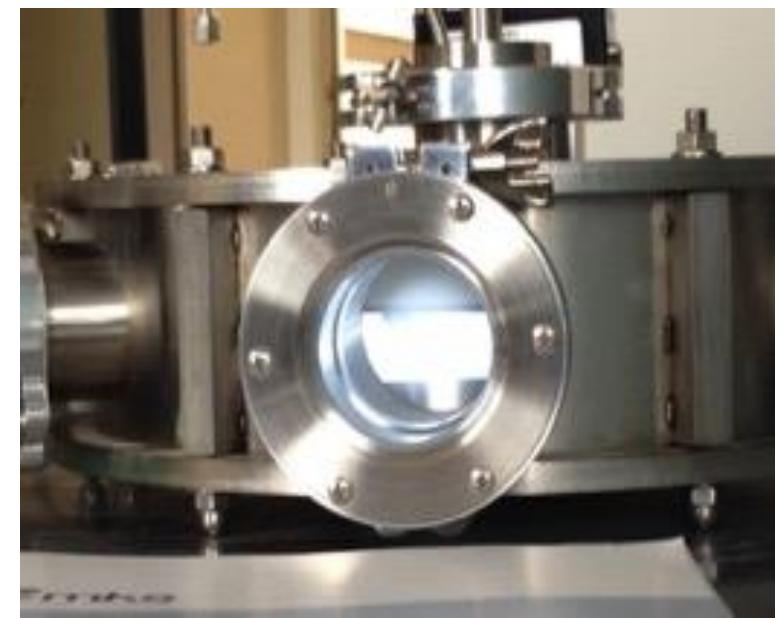
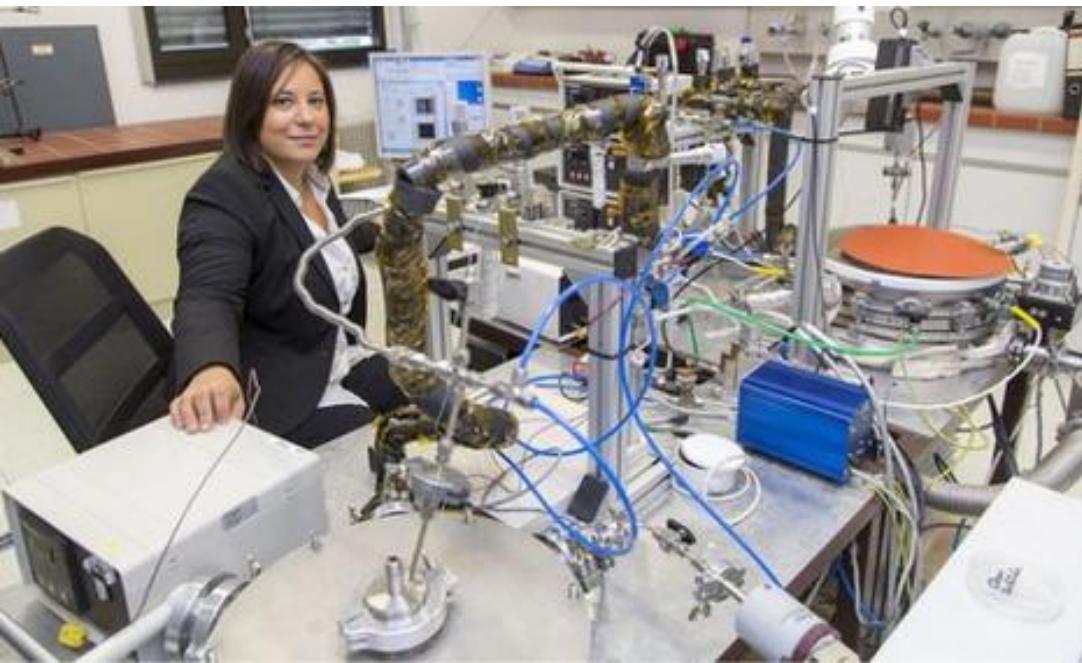
Chemical vapor deposition of polymer films

Entwicklung eines
Hybridmaterials zur Herstellung
multisensorischer künstlicher
Haut

Brennstoffzellen



Prof. Anna Coclite



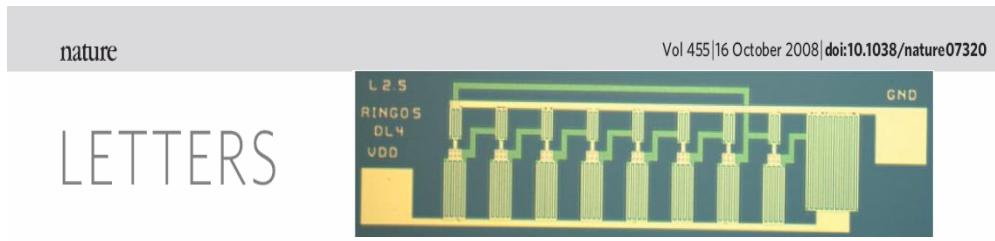
JOANNEUM RESEARCH - MATERIALS

Roll-to-Roll Nanoimprint



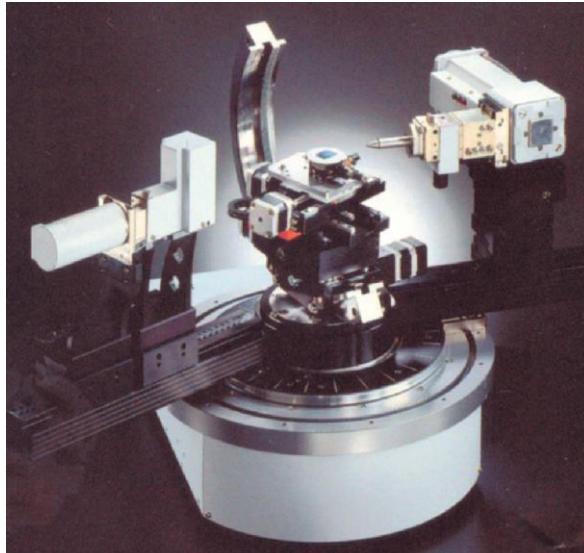
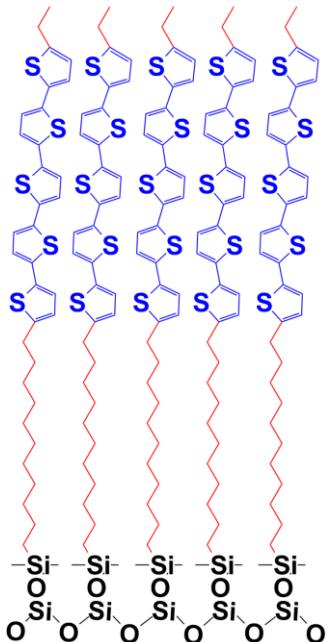
video: <http://www.joanneum.at/materials/forschungsbereiche/rolle-zu-rolle-nanoimprinten.html>

Organic semiconductors - thin films



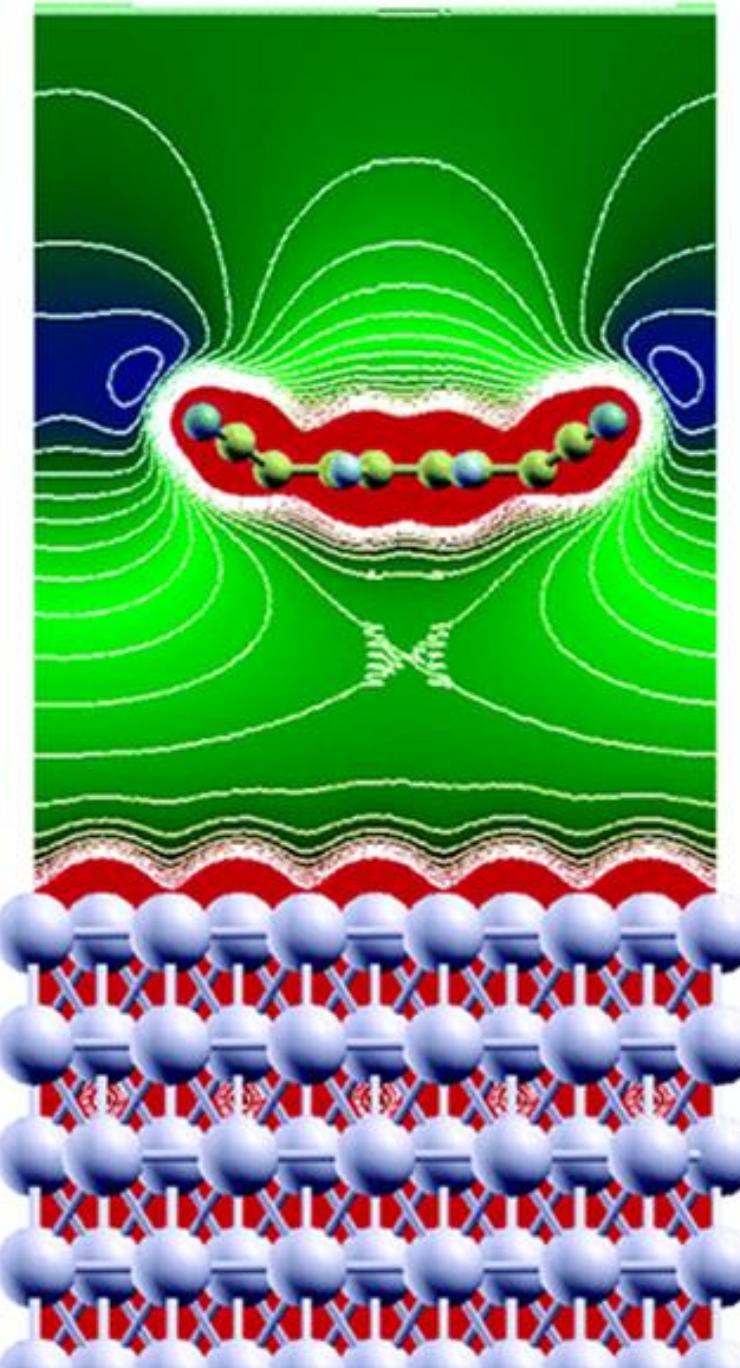
Bottom-up organic integrated circuits

Edsger C. P. Smits^{1,2,3}, Simon G. J. Mathijssen^{2,4}, Paul A. van Hal², Sepas Setayesh², Thomas C. T. Geuns², Kees A. H. A. Mutsaers², Eugenio Cantatore⁵, Harry J. Wondergem², Oliver Werzer⁶, Roland Resel⁶, Martijn Kemerink⁴, Stephan Kirchmeyer⁷, Aziz M. Muzafarov⁸, Sergei A. Ponomarenko⁸, Bert de Boer¹, Paul W. M. Blom¹ & Dago M. de Leeuw^{1,2}



Drug delivery
Joint project with KFU
Pharmaceutical Technology



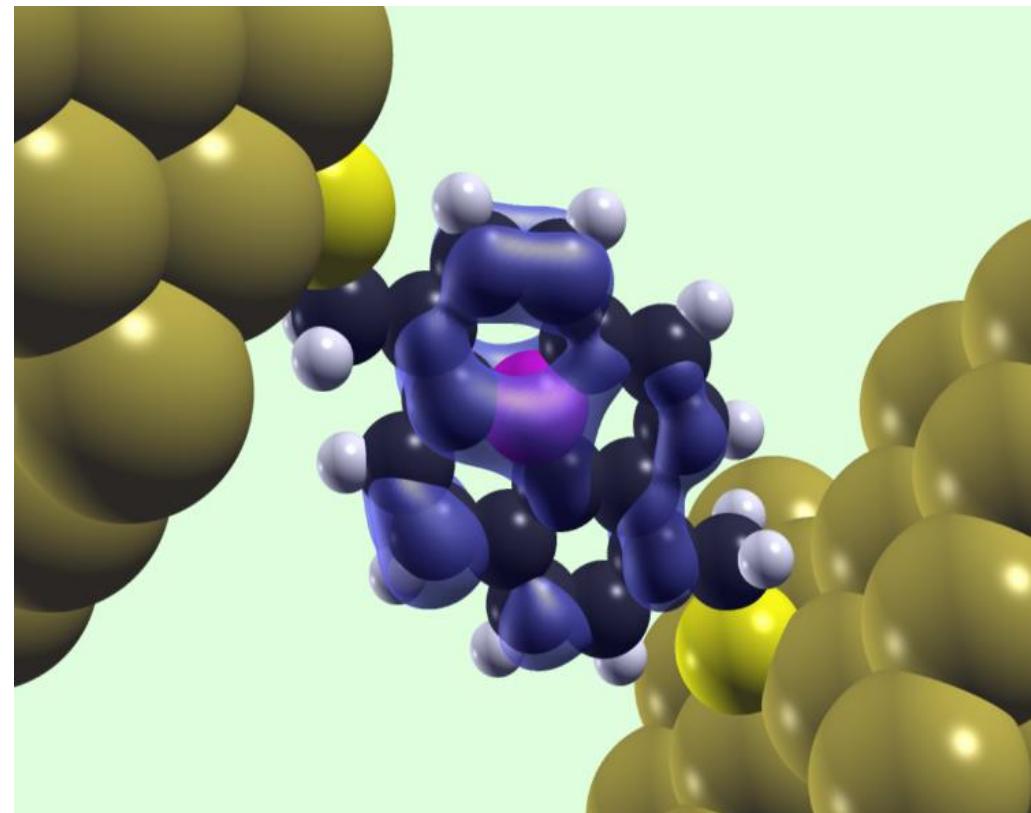


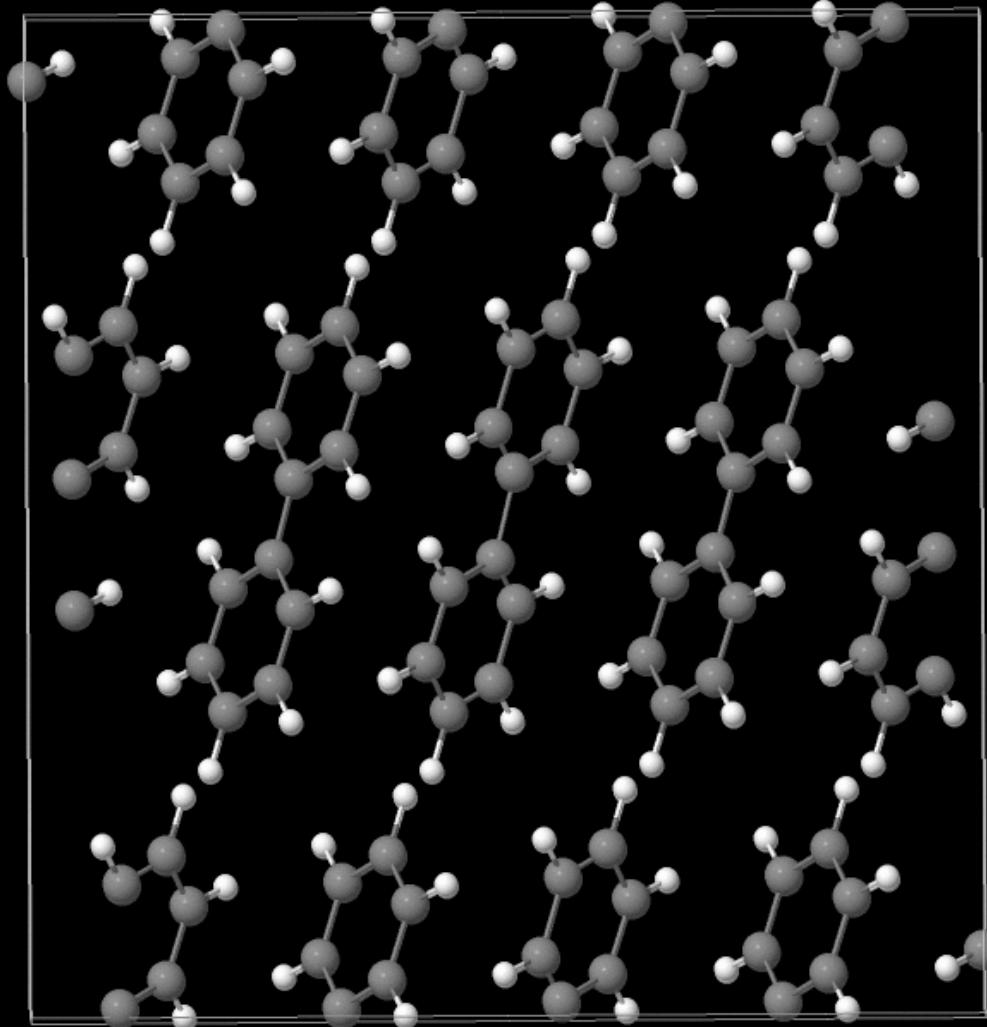
Materials Design

Quantum simulations



Prof. Egbert Zojer





Natalia Bedoya

In a normal mode, all of the atoms oscillate at the same frequency.

Using machine learning to find metastable polytypes

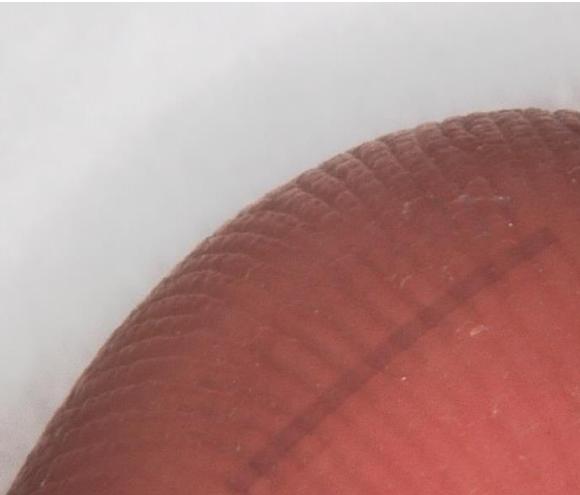
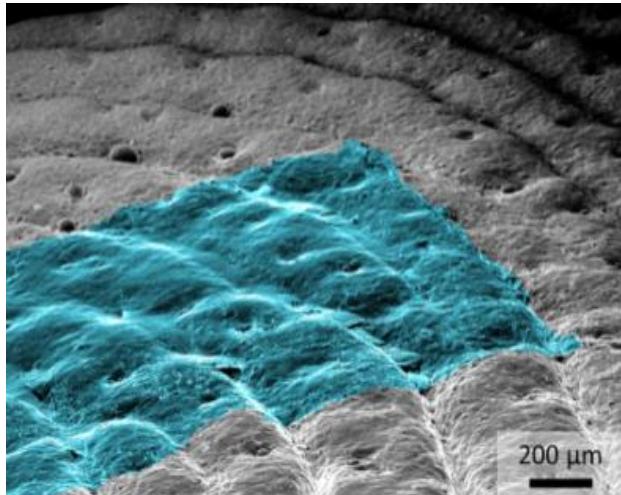


Prof. Oliver T. Hofmann

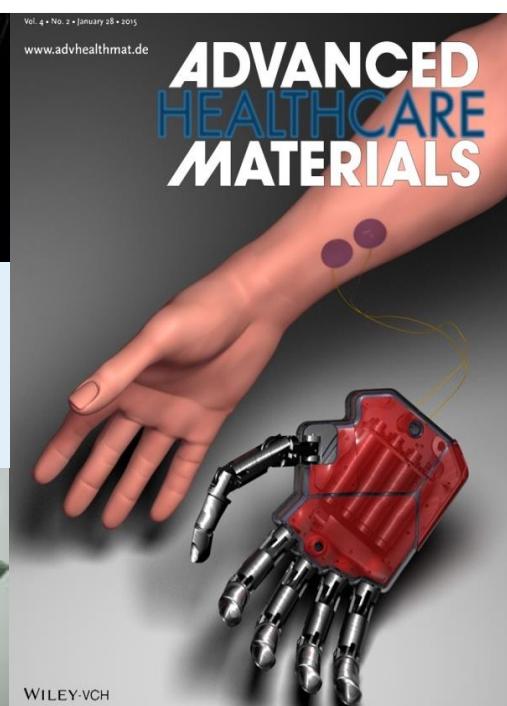
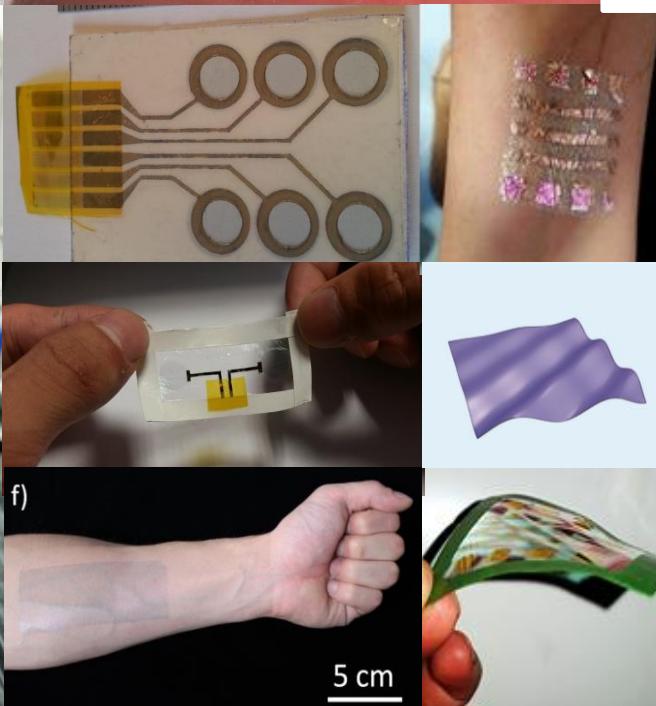
Different polytypes \Rightarrow Different properties

Where are the hidden diamonds?

Organic bioelectronics



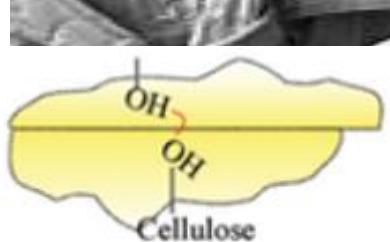
Prof. Francesco Greco



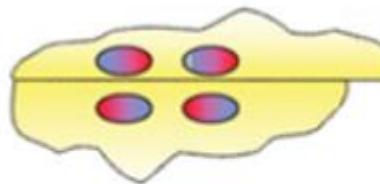
Paper Strength



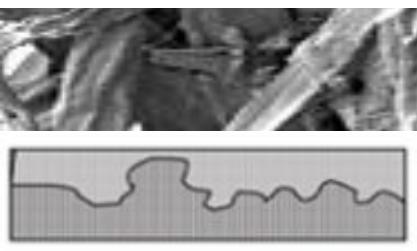
Prof. Robert Schennach



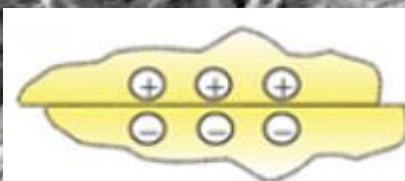
Hydrogen bonding



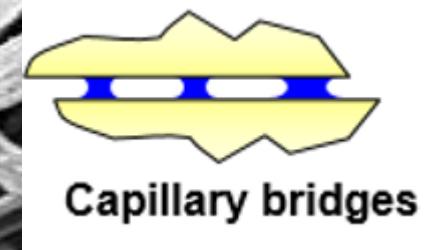
van der Waal forces



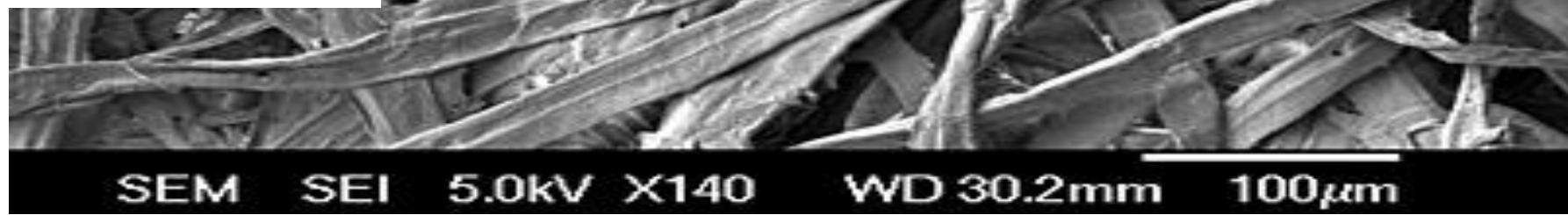
Mechanical
interlocking



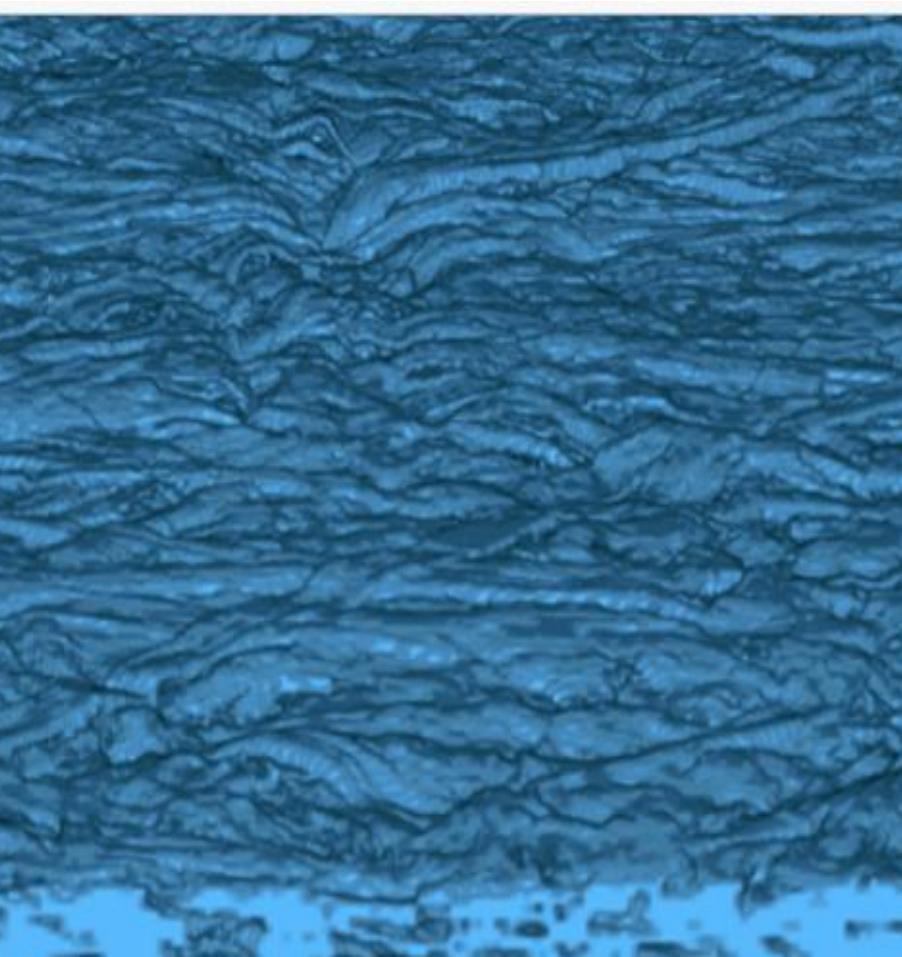
Coulomb forces



Capillary bridges



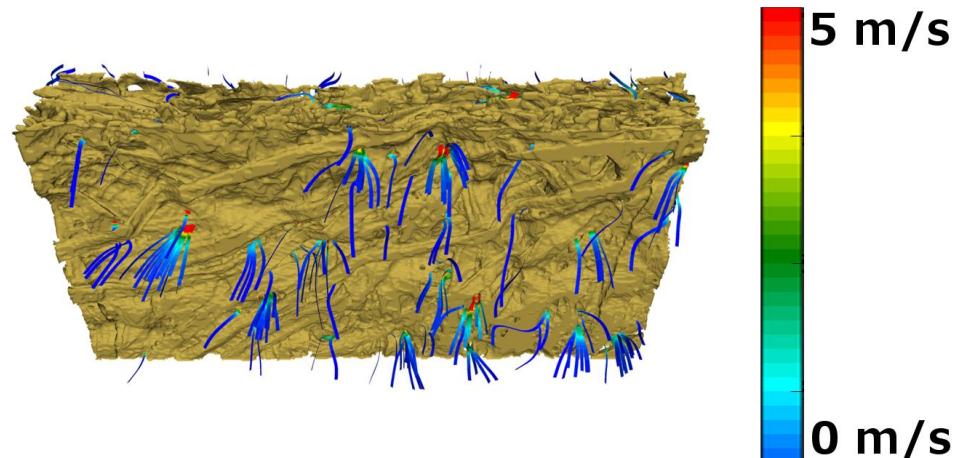
Christian Doppler Laboratory for mass transport through paper



Karin Zojer



Christian Doppler
Forschungsgesellschaft

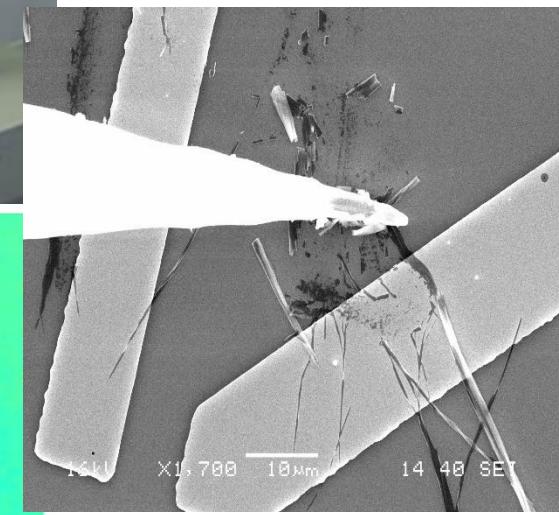
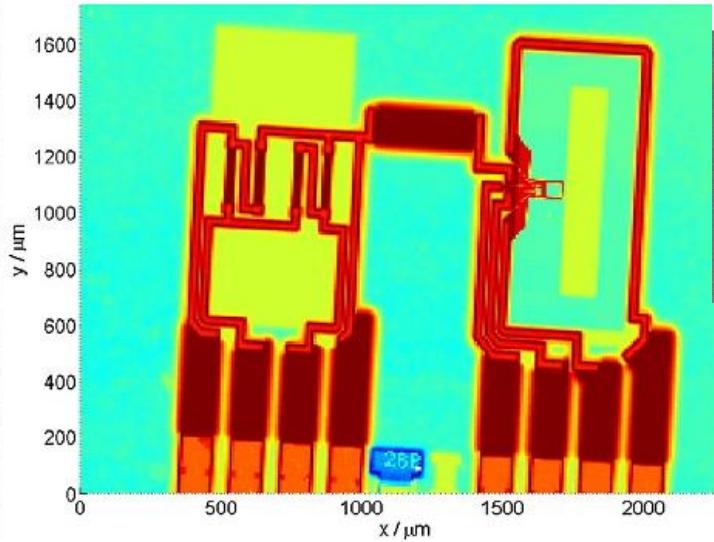
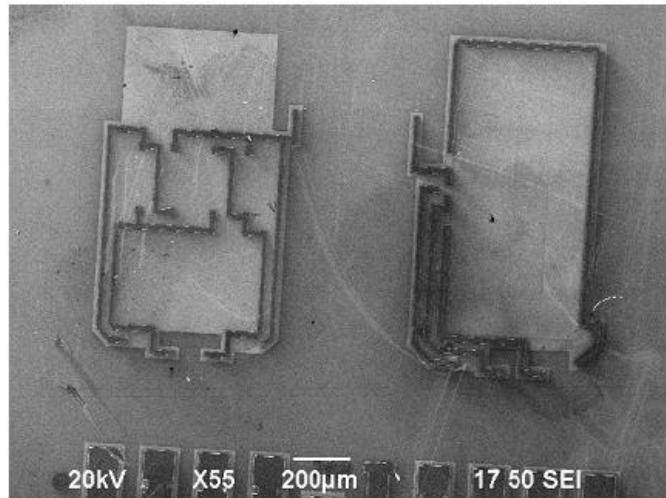


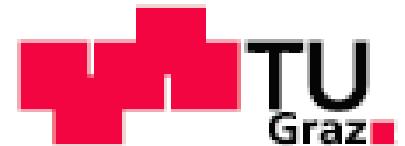
Defects in semiconductors

Photodetectors AMS
Proton doping Infineon
Power transistors
Microelectronics packaging



Prof. Peter Hadley





Institute of Solid State Physics

**Organic Semiconductors
Machine learning in
Materials Design
Robotic skin
Medical Sensors
Paper strength
Defects in semiconductors**

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