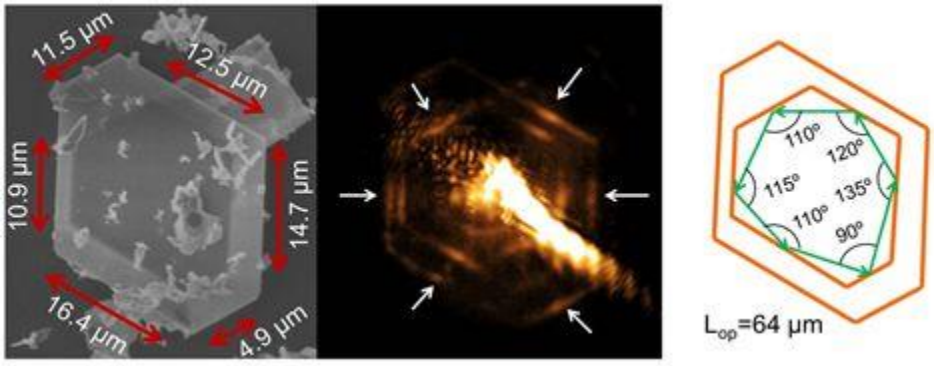
MATCH

Building the European Materials Common House

Focus on Photonics



Optical Resonant modes in ZnS nano- and microstructures

The UCM- Research Group "Physics of Electronic Nanomaterials" is active since more than 20 years. The current research of the FINE group refers to the relationship between the structural features of electronic nanomaterials and their optical and electronic local properties. Most of the investigated materials are semiconductor nanomaterials, mainly oxides, synthesized by thermal evaporation methods. Nanostructures with a large variety of morphologies, with predominance of elongated structures such as nanowires, nanoneedles or nanobelts, are grown and characterized. The Group has a large experience in application of

Smart specialization: Finland and, especially, the Joensuu region sees growth potential in photonics

When the education in physics started in the newly founded University of Joensuu in the beginning of the 1970's, optics was considered as the technology for future to be focused. First research topics were holography and optical materials followed by spectral color research. Similar conclusions were also made in several other universities and research institutes in Finland: leading-edge experimental research in photonics is financially possible even in a small country, like Finland, not requiring millions or tens of millions and above Euros investments in infrastructure. Finland also holds strong position in computing giving valuable support for theoretical and applied research.

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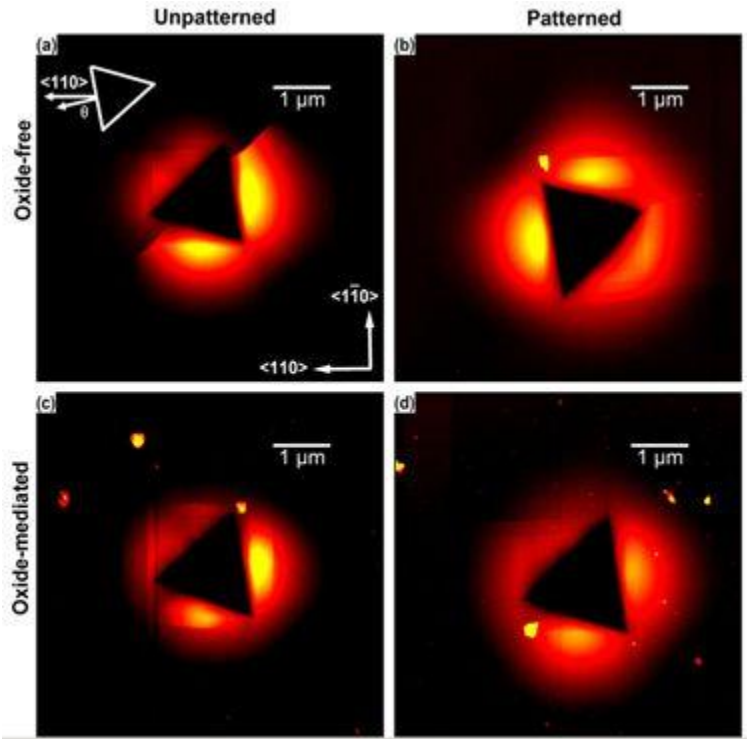

Wafer bonding of III-V semiconductors to Si platform: testing the interface

Over the past few years direct bonding of III-V semiconductors on Si has emerged as a promising alternative to hetero-epitaxy for the hybrid integration of active – amplification, emission in the direct gap III-V - and passive – guiding, switching in the indirect gap Si - optical functions in next-generation photonic integrated circuits (PICs). Such PICs offer a variety of advantages, foremost among which is the dense integration of advanced optical functions using sub-100nm patterns in the Si guiding layer. The processes used to pattern the Si may, however, deteriorate the quality of the hybrid bonded interface. Given the localized nature of such patterns it is highly desirable to have a technique to evaluate this quality on or in the immediate vicinity of these patterned regions.

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VI International Workshop on Oxide-based Materials

September 21-24, 2016, Napoli, Italy

The aim of the workshop is bringing together experimental and theoretical scientists of different origins and expertise to exchange information on common scientific research fields, especially on all those materials whose features and properties depend on the interactions between surface and ionic/or molecular species. During the meeting the participants will have the opportunity to compare their knowledge of familiar materials and share their experience on a varied range of different materials, often new materials, which include metal oxides, zeolite and other microporous compounds, mesoporous silicas and silicates, hybrid inorganic-organic compounds, layered materials, biomaterials etc. The VI edition will be focused on perspectives in material science and technological applications, including energy storage.

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Workshop on Roadmapping Materials needs & Technologies for a strong European Industry

October 19, 2016, 2pm-6pm, Bilbao, Spain

Co-located with EUROPEAN CONFERENCE ON NANOFILMS, in Bilbao, October 19-21.

The objective of the workshop is to bring forward the global landscape of Regional/National/European Collaborative, research & development activities on material topics with the focus on material types and needs versus application fields.

A Roadmap for promising Materials Technologies within industry led-key challenges will be built. The workshop will facilitate the formulation and recommendation on future R&D Needs on Materials technologies and to identify top priorities & funding for upcoming Horizon 2020 programs.

Register at www.ecnf2016.org (free of

EuroNanoForum 2017

June 21-23, Malta

The EuroNanoForum 2017 conference (ENF 2017) will take place on 21-23 June 2017 in Malta under the auspices of the Maltese presidency of the European Union. It is organised in cooperation with the European Commission's Directorate-General for Research and Innovation.

European competitiveness and jobs depend on strengthening European manufacturing capabilities by providing essential technology building blocks in the form of high value-added products and their manufacturing processes in strategic European value chains. The aim of the conference is to contribute to these efforts of strengthening European competitiveness and supporting the renewal of its manufacturing industries, by the aid of nano- and microtechnologies and advanced materials.

ENF2017 will review the status of European technology development in nanotechnology and advanced materials industries, discussing the latest progress in nanoscience and nanotechnology, and their contribution to innovation in manufacturing across all industrial sectors.

cost, financed by EU Commission under MATCH Project).

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The MATCH project was initiated to strengthen and deepen the Alliance4Materials strategy with a further increased stakeholder network. The project is coordinated by Italian Centro Sviluppo Materiali and the whole consortium consists of 18 partners from nine countries representing the six related European Technology Platforms and several major European material research organisations.

The project started in January 2015 and will continue for 30 months until June 2017. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646031. Read more