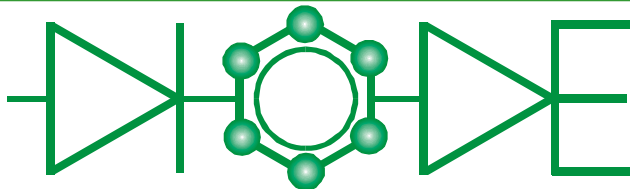


Dublin Meeting

Dr. Javier Méndez
***University of Wales,
Aberystwyth***



IHP Research Training Network



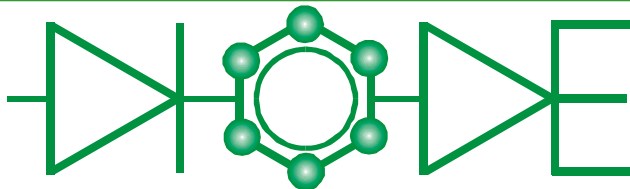
*Javier Méndez,
Aberystwyth*

Outline

- Background
- Role in DI ODE network
- Collaboration and Contribution
- Techniques
- Results
- Impressions



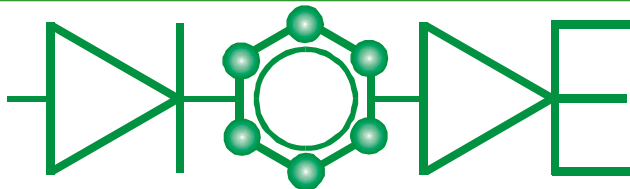
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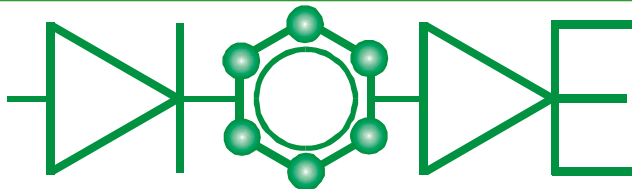
Background

- 1985-1990 **Physics Degree**. Universidad Autónoma de Madrid
- 1990-1996 **Doctor in Physics**. Universidad Autónoma de Madrid
- 1997-1998 **Postdoc**. Humboldt Universität Berlin
- 1998-2000 **Postdoc**. FHI - Max Planck Berlin
- 2000-2002 **DIODE** project
 - Universidad Autónoma de Madrid
 - Aberystwyth University of Wales (Postdoc)
 - Instituto Ciencia de Materiales CSI C, Madrid



Role in DIODE

- Characterisation of the inorganic/organic device by Scanning Probe Microscopy (STM and AFM) and Spectroscopy (STS)
- Other techniques (XPS, Ellipsometry, Optical microscopy)

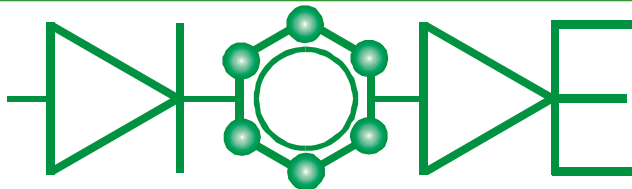


Collaboration and Contribution

- Collaborations:
 - Iván Cerrillo
 - Joachim Steiner
 - Nicoleta Nicoara (supervisor)
- Training Workshop (STM, AFM and Theoretical simulations)



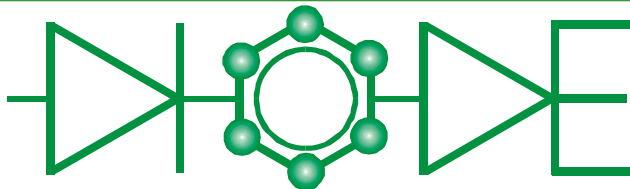
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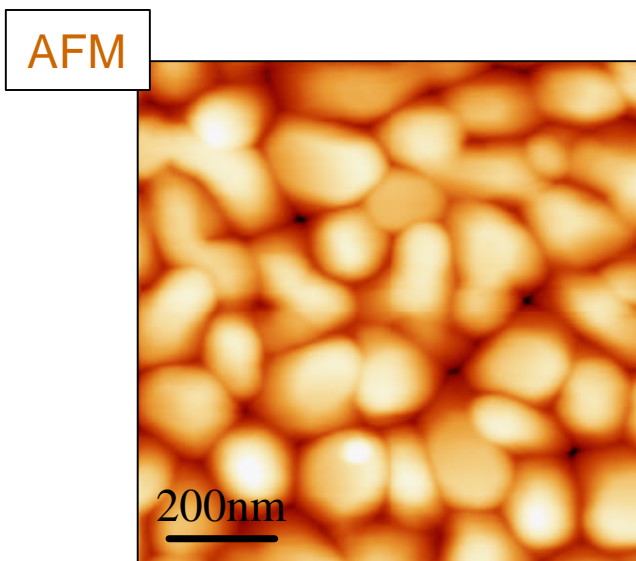
Techniques

- Scanning Tunneling Microscopy
 - Force Microscopy
- Scanning Tunneling Spectroscopy
- X-ray Photoelectron Spectroscopy
 - Ellipsometry
- Optical Microscopy



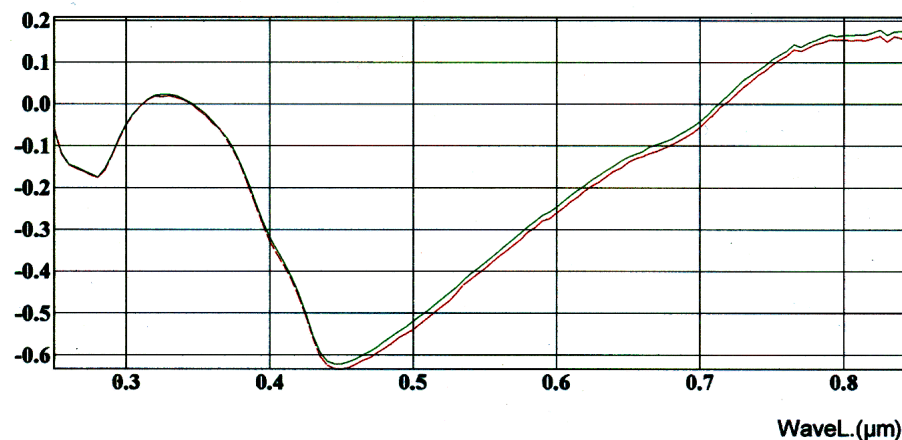
Morphology of PTCDA on S-GaAs(001)

- PTCDA nanocrystals



- Organic layer
100ML

Cos(Delta)

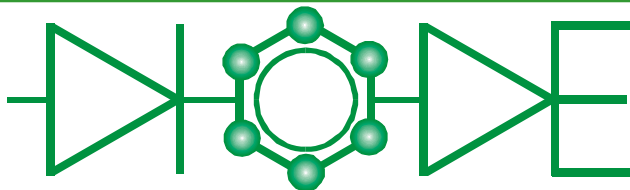


Ellipsometry

- Corrugated substrate
- Absorption spectra of
PTCDA/S-GaAs



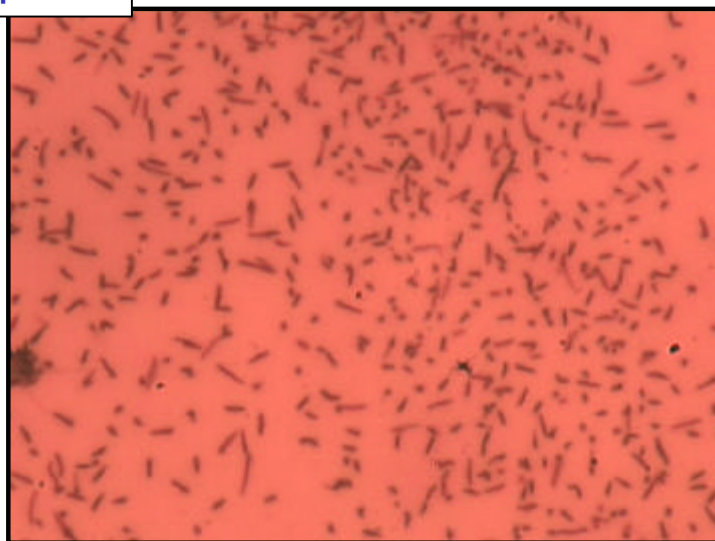
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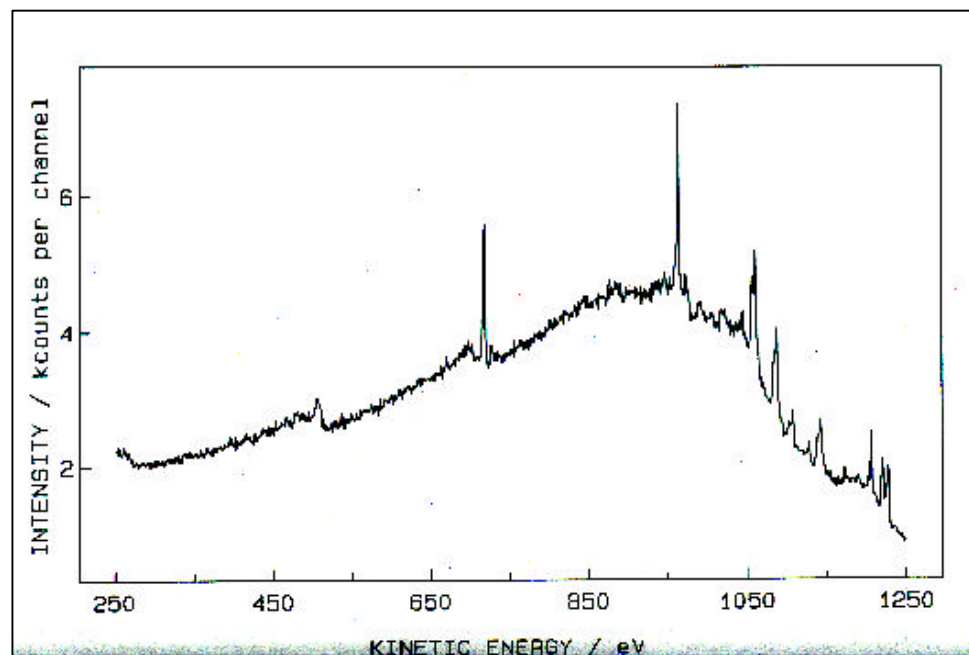
Spectroscopy

Optical



- Separated crystals

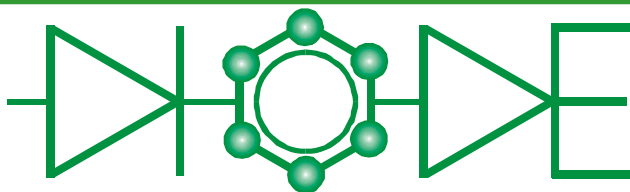
XPS



- Spectroscopy at 60°



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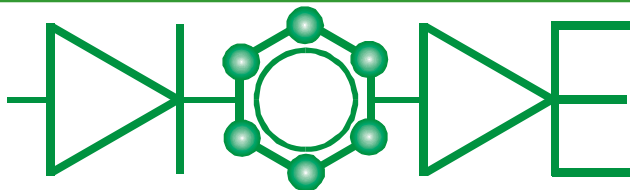
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Impressions

- Experience: learning from other techniques and methods
- Collaborations: best opportunity for co-working with young researchers from other countries
- Increase: interchange between the groups
- Aim: to participate in other networks



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