Andrés Pinar Solé

More info:
https://andrespinarsole.wordpress.com/

Education

2020 – 2024 **Charles University (Prague)**
PhD

2019 – 2020 **Universidad Autónoma de Barcelona (UAB) (Barcelona)**
Masters degree on Nanoscience and Nanotechnology

2016 – 2017 **Université Libre de Bruxelles (ULB) (Brussels)**
Erasmus Bachelor on Physics

2010 – 2018 **Universidad Complutense de Madrid (UCM) (Madrid)**
Physics Degree on Applied Physics

2008 – 2010 **International Baccalaureate (Bachillerato Internacional) (Alcázar de san Juan)**
Scientific Program. High level English, Mathematics, Physics and Chemistry

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Scientific Research

- **Internship at the Spanish Meteorologic Agency** (2017) (AEMET) in Madrid, Spain, supporting the meteorology interpretation team.
- **Internship at the Catalan Institute of Nanoscience and Nanotechnology** (2019)(ICN²) in Barcelona, Spain, developing nanofotonic materials for radiative cooling of solar cells.
- **Collaboration at the Regional Centre of Advanced Technologies and Materials** (2022,2024)(CATRIN-RCPTM) in Olomouc, Czech Republic, studying different molecular systems by means of low temperature STM and non-contact AFM.
- **Collaboration at the Center for Quantum Nanoscience** (2023) (QNS) in Seoul, South Korea, studying the nickelocene STM tip functionalization for Electron Spin Resonance (ERS) by means of low temperature STM.
- **Collaboration at the Instituto Madrileño de Estudios Avanzados** (2023)(IMDEA) in Madrid, Spain, measuring the magnetic properties of nanographene derivatives with the nickelocene STM tip functionalization.
- **PhD at Nanosurf lab in the Czech Institute of Physics** (2020-2024)(FZU), Prague, Czech Republic. Measured different molecular systems in ultra-high vacuum and cryogenic conditions utilizing a Specs LT-STM equipped with a Joule-Thompson stage, LEED and STM/nc-AFM Kolibri sensor, and a Createc STM with STM/nc-AFM QPlus sensor. Focused on spin probing magnetism in molecular systems by means of nickelocene STM tip functionalization.
- **Postdoc at the Center for Quantum Nanoscience** (QNS) (2024-currently) Seoul, South Korea

Publications

- **Role of the magnetic anisotropy in atomic-spin sensing of 1D molecular chains** (ACS nano 2022)
- **Designer magnetic topological graphene nanoribbons** (Arxiv preprint 2022)
- **Highly entangled polyradical nanographene with coexisting strong correlation and topological frustration** (Nature Chemistry 2024)
- **Light-Controlled Multiconfigurational Conductance Switching in a Single 1D Metal–Organic Wire** (ACS Nano 2024)
- **On-Surface Synthesis of Helicene Oligomers** (Chemistry A European journal 2024))
- **Ferromagnetic Order in 2D Layers of Transition Metal Dichlorides** (Advanced Materials 2024)
- **Designing highly delocalized solitons by harnessing the structural parity of π-conjugated polymers** (ResearchSquare preprint 2024)
- **Unveiling the inter-layer interaction in a 1H/1T TaS2 van de Waals heterostructure** (Nano Letters 2024)
- **Multi-orbital Kondo screening in strongly correlated polyradical nanographenes**(Arxivs preprint 2024)

- **Globally Aromatic Odd-Electron pi-Magnetic Macrocycle** (Submitted to Chem 2024)