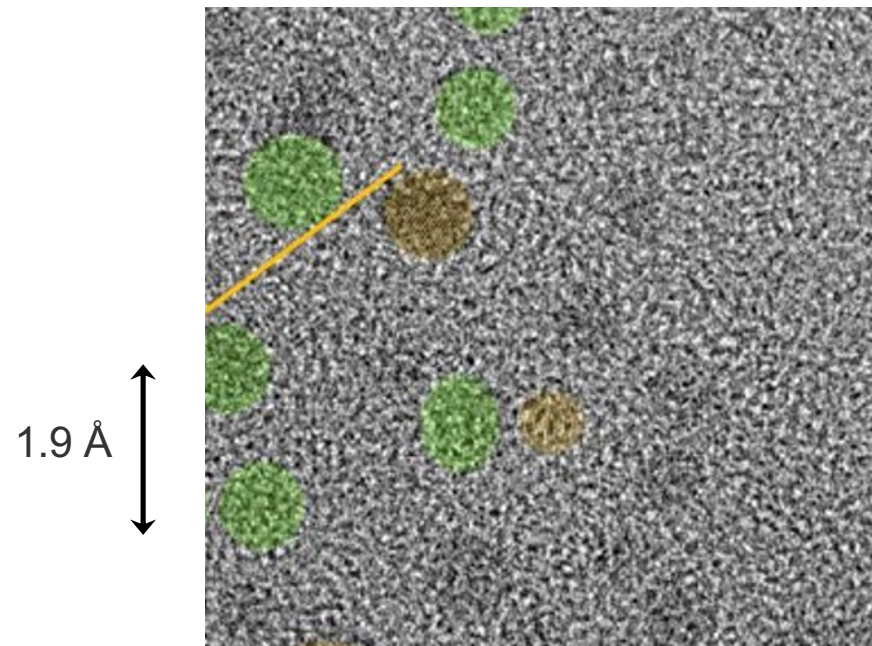


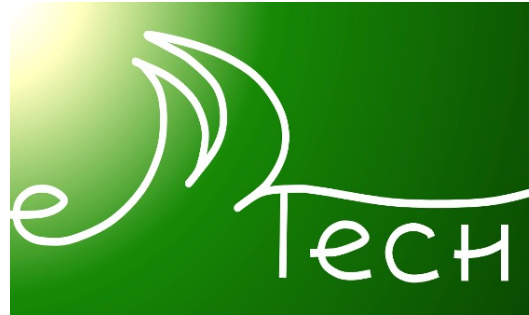
CQD: Nonlinear Electronic Transport in Carbon Quantum Dots

David Sánchez

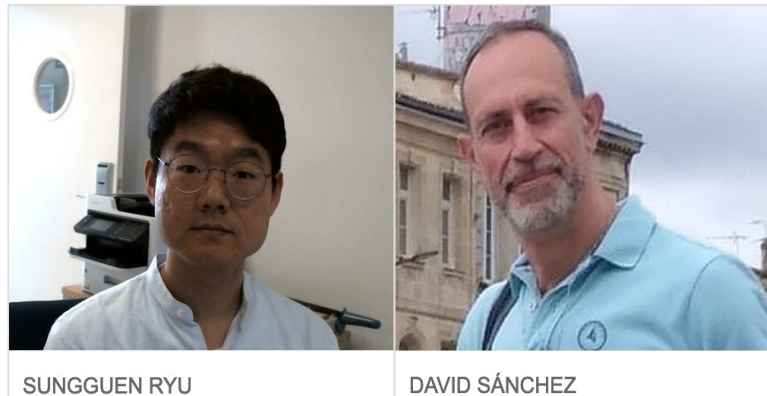


IFISC Winter Solstice Event (2024)

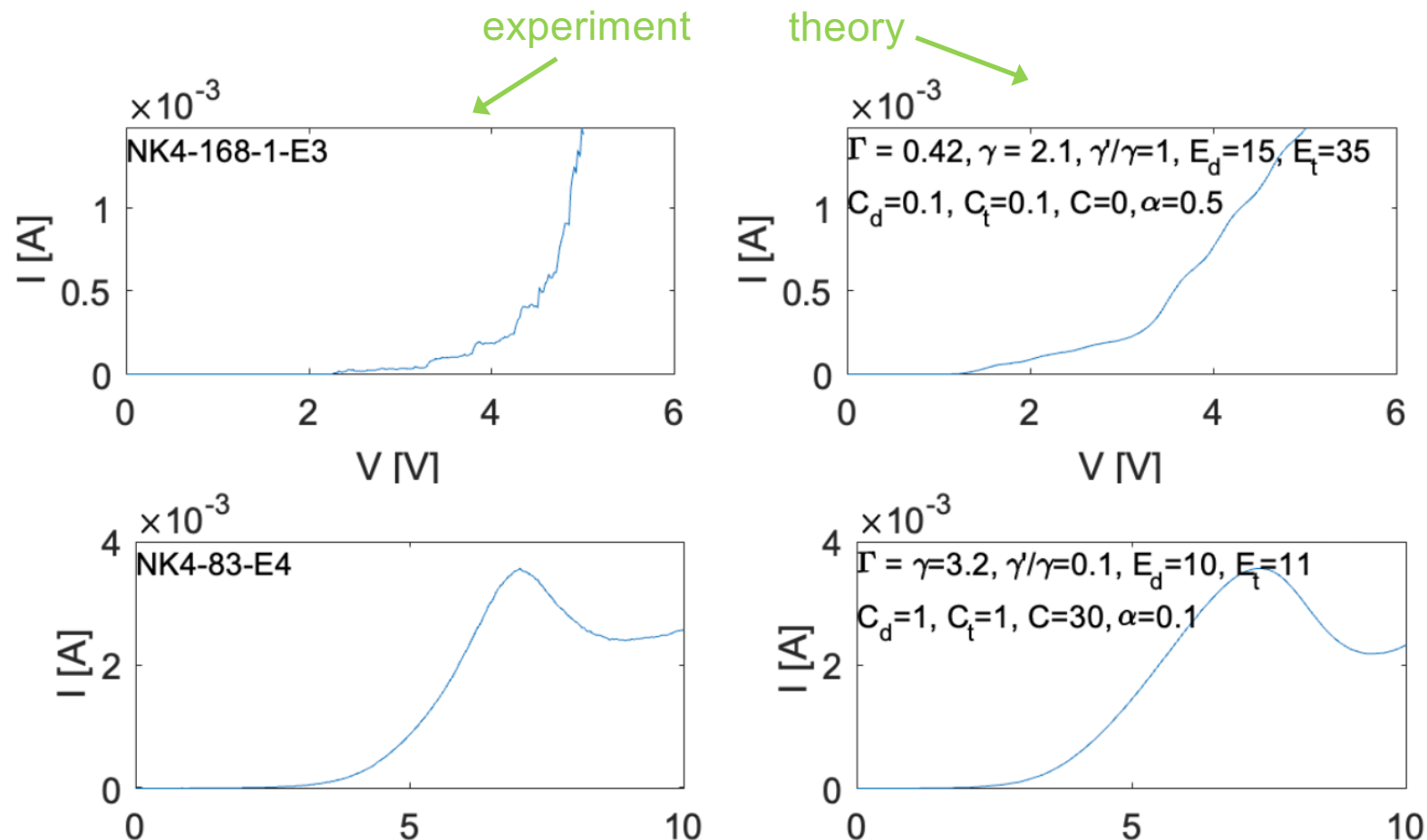
- **Agreement** with eM-TECH Inc.



- Coordinators: Paul Czubarow (em-TECH) and David Sánchez (IFISC)
- **Budget:** 15 kEuro (managed by FUEIB)
- Period: Dec 14 (2023) — June 14 (2024)



Main: To understand the nonlinear transport properties of CQDs useful for protection of electrical equipment



Model: Rate equations for the charge occupation in CQDs. Importance of Coulomb interactions, asymmetric tunneling and multilevel structures

Challenge: Integration into current design formats for circuit boards



THANK YOU

for your attention