

## Integration of molecular solar cells and electrocatalysis for CO<sub>2</sub> reduction

 *Timeline* | 06/2020 to 05/2023    
  *ICIQ People* | [Palomares Research Group](#)  
 *Budget* | 254,100 €    
  *Call* | [Proyectos I+D - Retos Investigación 2019](#)

### SUMMARY

**INTEGRA2** aims to study novel materials and analyse and understand photo-electro catalysis of carbon dioxide (CO<sub>2</sub>) using solar cells as a current/voltage source and carbon based materials as electro active catalysts. The project targets to rationalize the products of the CO<sub>2</sub> reduction, with the applied electrical bias, the nature of the catalyst and the reactor design. **INTEGRA2** will use solar cells based on hybrid perovskites and organic semiconductor molecules as photoactive material and carbon dots as electro active catalysts. To complete our objectives, the project has enrolled a multidisciplinary research team with previous experience on the fabrication of photovoltaic devices, the measurements and analysis of photo-electrochemical devices and the synthesis and characterisation of carbon dots.

### PLANNING

