



RIS3CAT

Project: INTEGRO (IREC, ICFO)

INTEGRO

INTEGRO – Perovskite solar cell combined with graphene electrode for CO2 reduction

The INTEGRO project aims to develop an artificial photosynthesis device, combining a low cost, high voltage and efficient photovoltaic (PV) cell, based on perovskite technology, with a metal-free electrocatalyst (EC) fabricated using nitrogen doped graphene, in order to create an integrated PV-EC system. This system powered by solar energy, will be able to operate at low voltages (< 2.4V) and high faradaic efficiencies (> 80%) and will be able to supply enough energy to initiate the CO2 reduction reaction, reaching a solar to fuel conversion efficiency > 10%.



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