

NANOMAT2024

2024 ANNUAL NANOTECHNOLOGY CONFERENCE

25 - 28 AUGUST 2024

HOME

ABOUT THE CONFERENCE

SPEAKERS

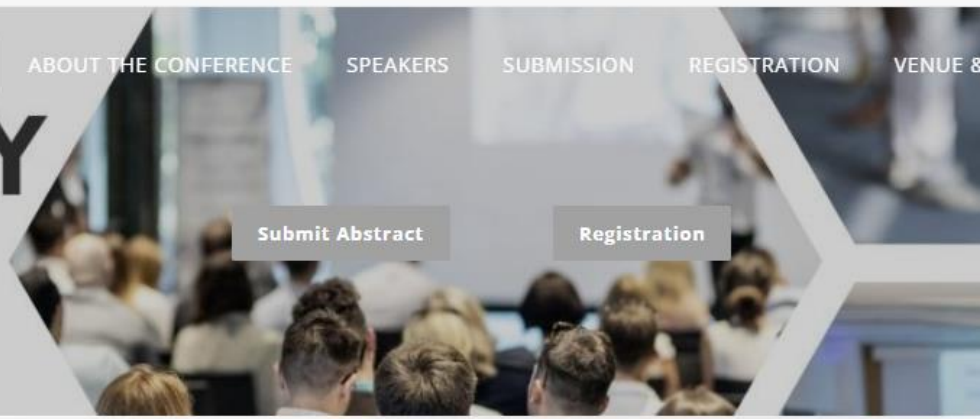
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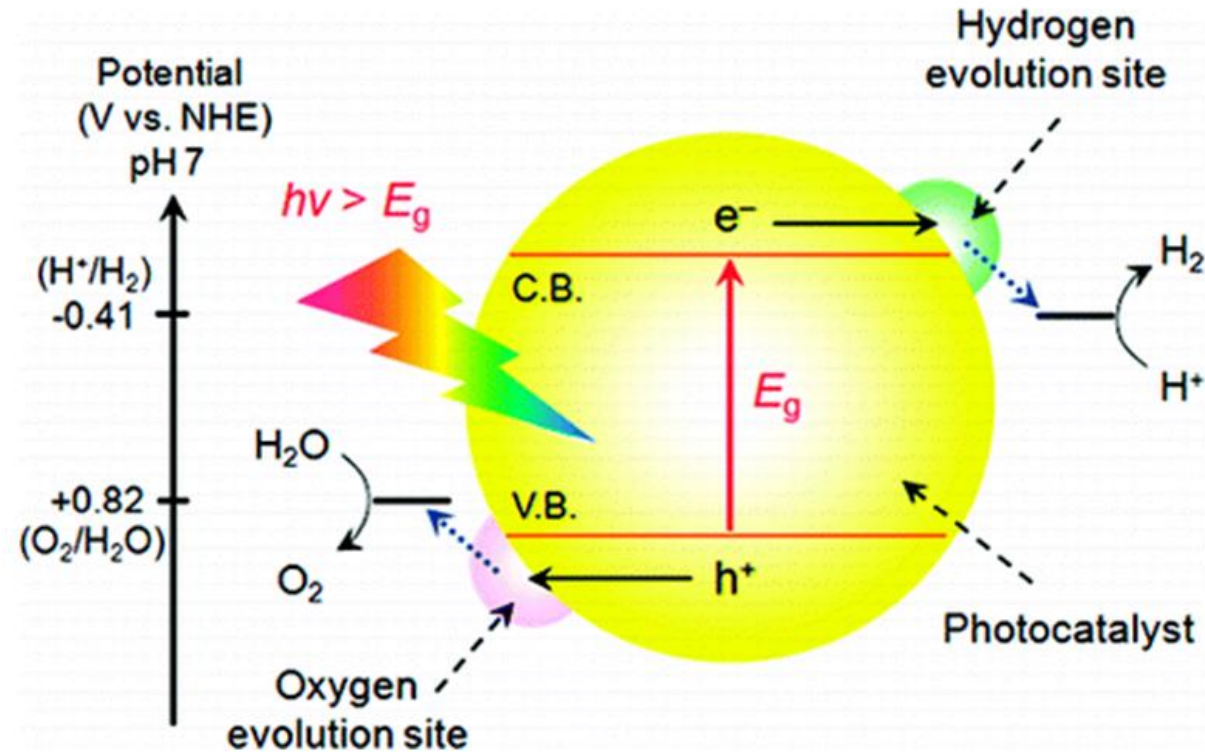


HYBRID MOLECULAR MATERIALS FOR ENERGY APPLICATIONS



NANOMAT-2024, Wien
25–28 August, 2024

Antoni Llobet Research Group, ICIQ, Tarragona, Spain



GW-CC

REPLACING FOSSIL FUELS BY SOLAR FUELS

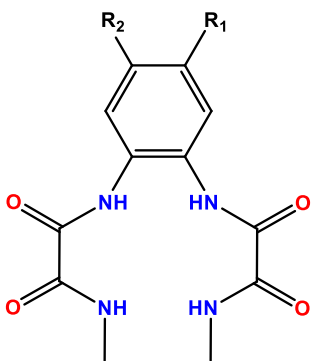
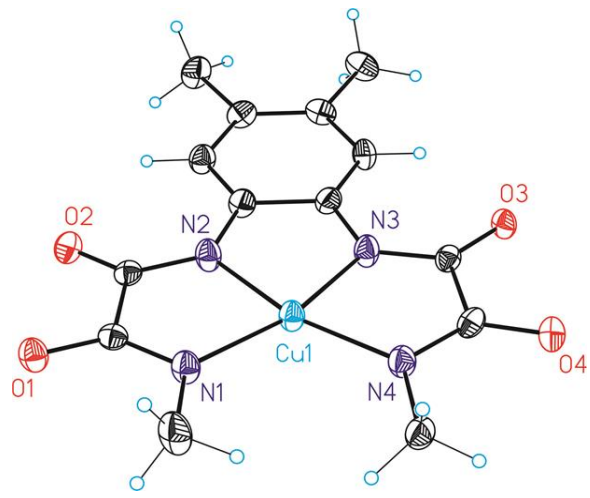
F-H eff./PS-II



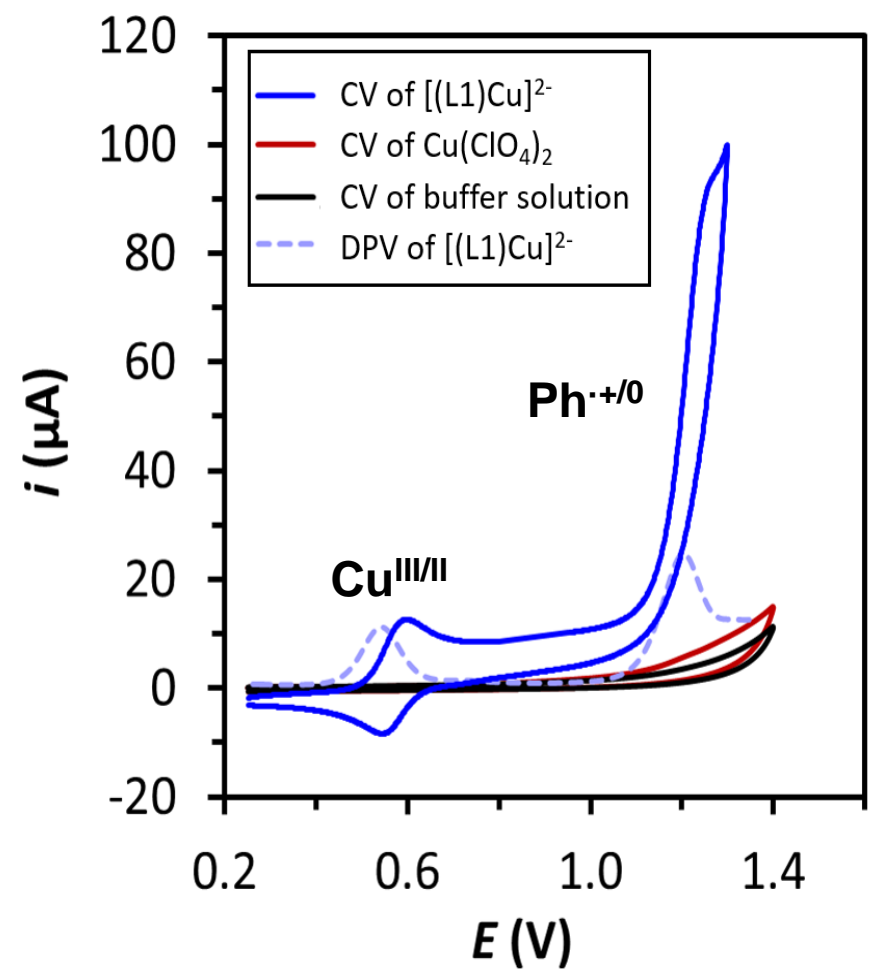
Maeda, K.; Domen, K. *J. Phys. Chem. Lett.*, **2010**, 1, 2655-2661

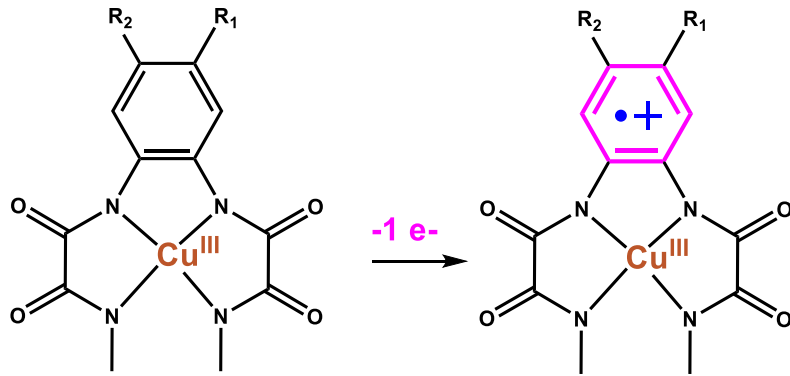
Fujishima, A.; Honda, K., *Bull. Chem. Soc. Jpn.*, **1971**, 44, 1148-1150

Cu-BASED WOCs



- R₁ = R₂ = H; H₄L1
- R₁ = R₂ = Me; H₄L2
- R₁ = H, R₂ = OMe; H₄L3
- R₁ = R₂ = OMe; H₄L4





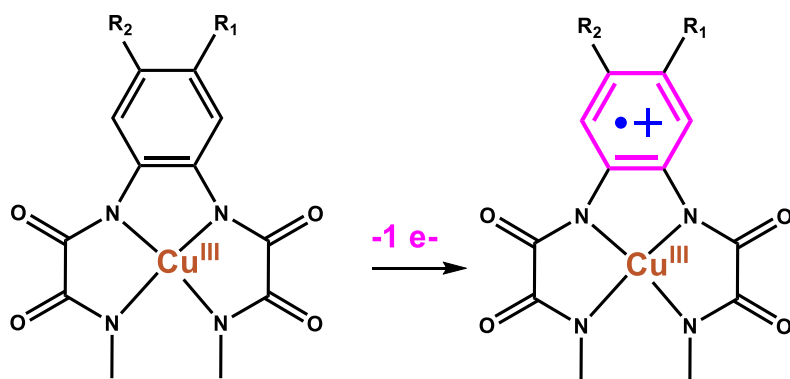
$R_1 = R_2 = \text{OMe}; \text{H}_4\text{L4}$

$R_1 = \text{H}, R_2 = \text{OMe}; \text{H}_4\text{L3}$

$R_1 = R_2 = \text{Me}; \text{H}_4\text{L2}$

$R_1 = R_2 = \text{H}; \text{H}_4\text{L1}$

REDOX NON-INOCENT LIGAND CONTROLS OVERPOT

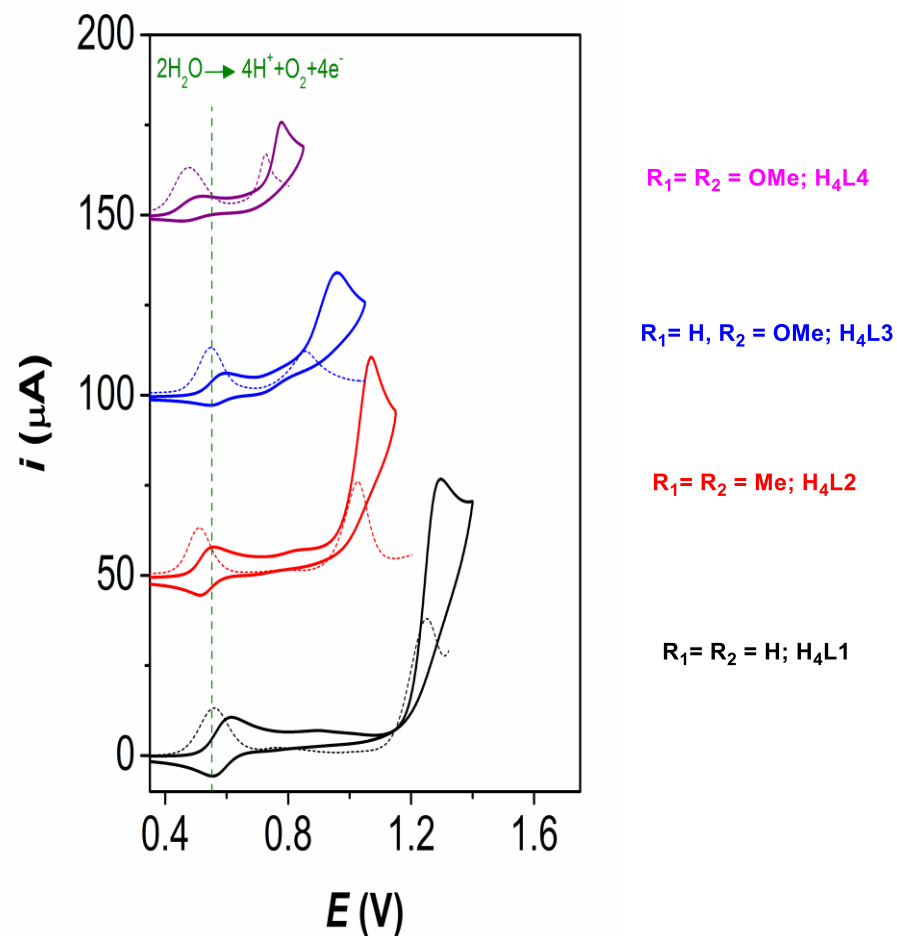


$R_1 = R_2 = \text{OMe}; \text{H}_4\text{L4}$

$R_1 = \text{H}, R_2 = \text{OMe}; \text{H}_4\text{L3}$

$R_1 = R_2 = \text{Me}; \text{H}_4\text{L2}$

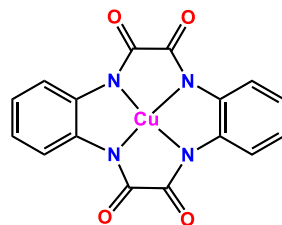
$R_1 = R_2 = \text{H}; \text{H}_4\text{L1}$



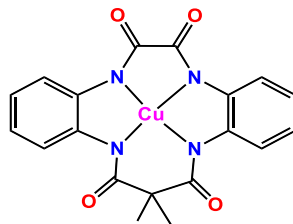
Record Low Overpotential for FR-TM

Cu-Macs PARALLEL CHEM at pH 7

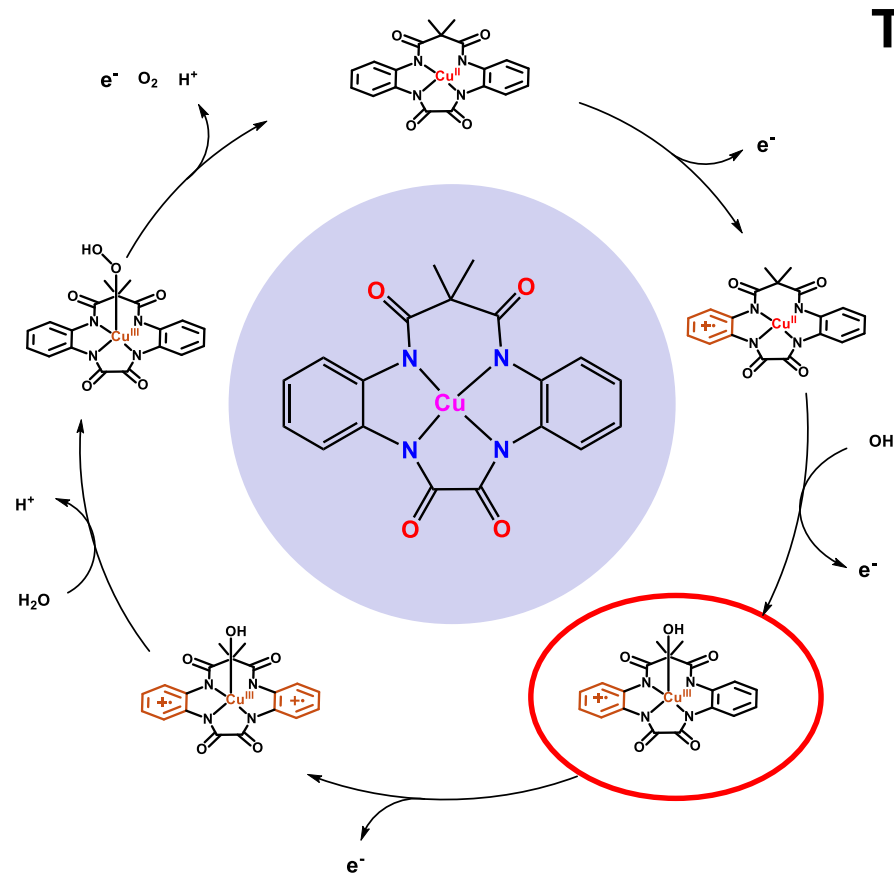
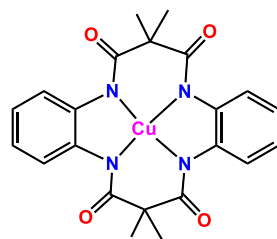
12 MR



13 MR



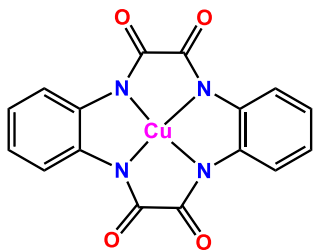
14 MR



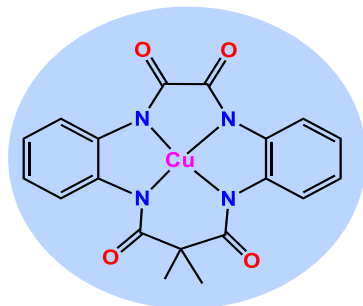
TR UV-vis/IR

TR XAS

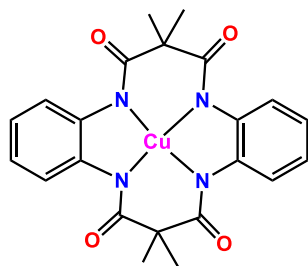
12 MR



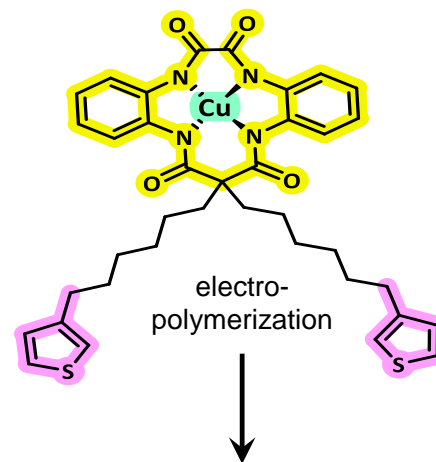
13 MR



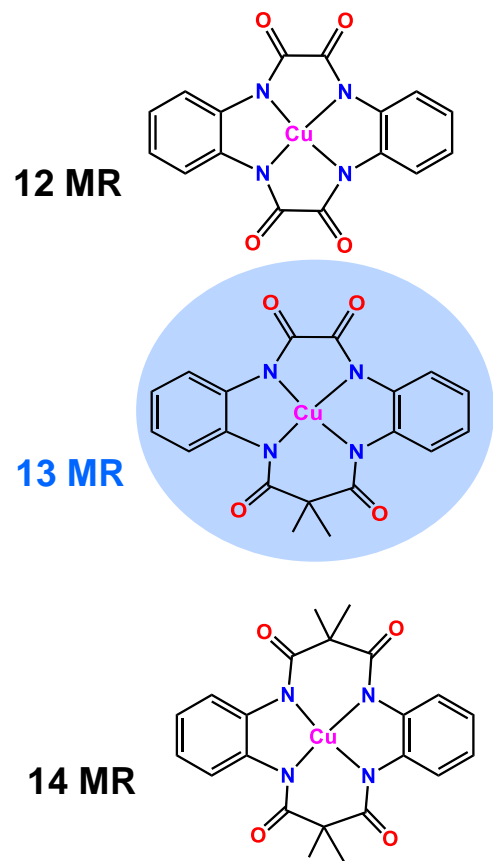
14 MR



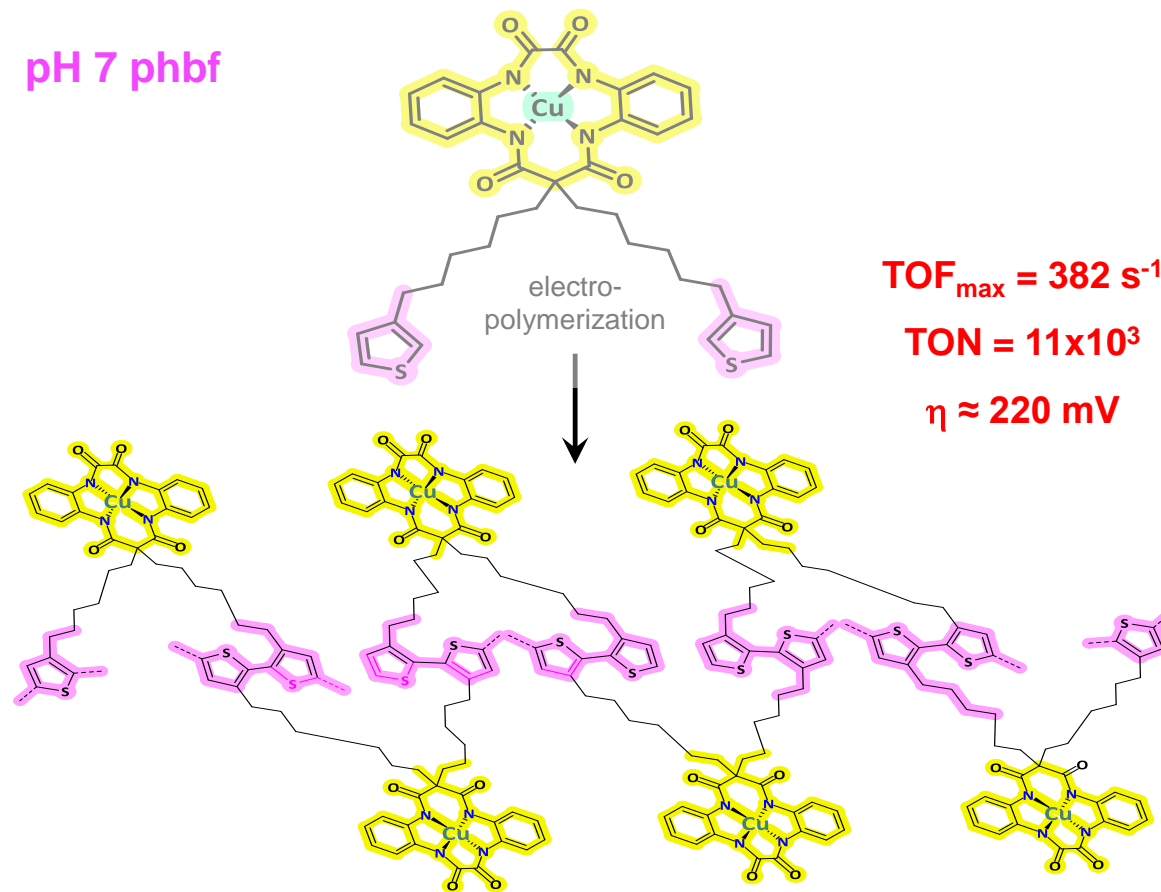
pH 7 phbf



Cu-Macs PARALLEL CHEM at pH 7



pH 7 phbf





CO₂NDOR

Project Number: 101006839

Project Acronym: CONDOR

Project title: COmbined suN-Driven Oxidation
and CO₂ Reduction for renewable energy storage