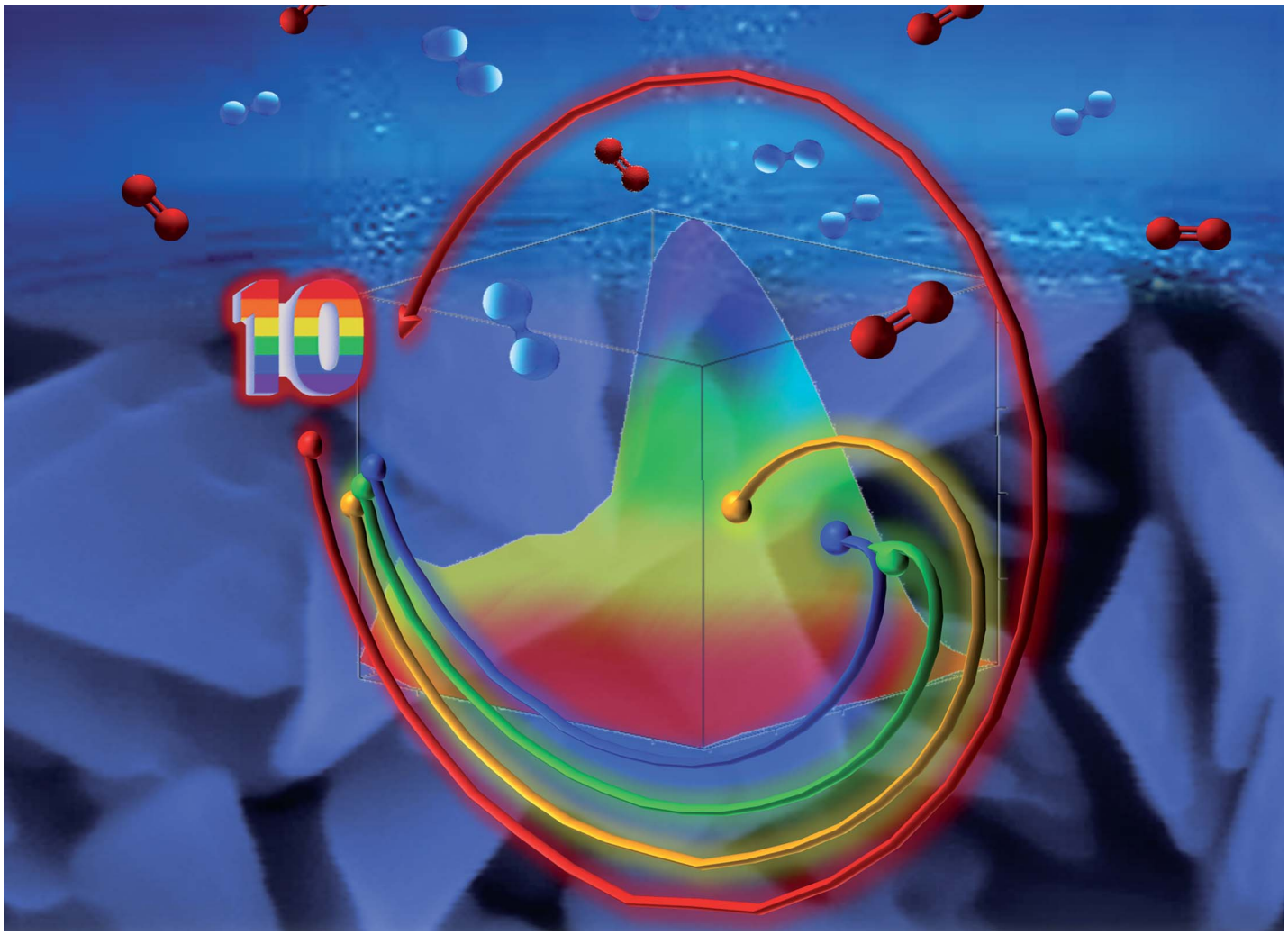

Showcasing research from Padova University, CNR-ICMATE, and INSTM, Padova, Italy, in collaboration with Laboratoire CRISMAT, CNRS, Caen, France, GFZ German Research Centre, Potsdam, and Ruhr University Bochum, Germany.

Advances in photo-assisted seawater splitting promoted by green iron oxide-carbon nitride photoelectrocatalysts

Fe_2O_3/graphitic carbon nitride (gCN) photoelectrocatalysts for seawater splitting are developed by a hybrid plasma-assisted vapor phase/electrophoretic deposition. The best performances correspond to a Tafel slope of ≈100 mV dec^{-1} and an overpotential <350 mV, enabling exclusion of the competitive hypochlorite formation. This behavior, accompanied by the remarkable durability, opens the door to a profitable exploitation of natural resources for clean energy production with no environmental footprint.

As featured in:

See Gian Andrea Rizzi, Chiara Maccato *et al.*, *J. Mater. Chem. A*, 2023, **11**, 21595.

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