

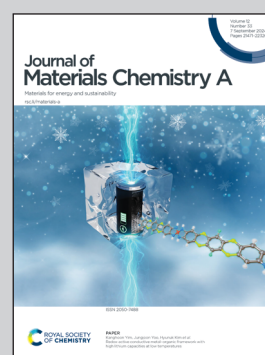


Highlighting a study on *In-situ* Capturing Site-to-Site Reactive Species in CO₂-Laser Patterned High-Entropy Alloy by a group of researchers led by Professor Myong Yong Choi, Department of Chemistry, Gyeongsang National University, Jinju, South Korea.

In situ capturing site-to-site reactive species in CO₂-laser-patterned high-entropy alloy nanoflowers for robust alkaline seawater electrolysis

AuRuIrPdPt high-entropy alloys (HEAs) was synthesized using a rapid CO₂ laser irradiation method. Optimized HEA-60, synthesized at 60% of 25 W power, exhibited outstanding hydrogen evolution reaction (HER) activity with low overpotentials of 37, 34, and 45 mV at 10 mA cm⁻² in alkaline, simulated seawater, and natural seawater, respectively, outperforming commercial Pt/C. *In situ* Raman probes reveal the involvement of metals (M = Pt, Pd, and Ru) in the HER process, with M-H and M-O observed as intermediates rather than M-OH.

As featured in:



See Myong Yong Choi *et al.*,
J. Mater. Chem. A, 2024, **12**, 21744.