



**Showcasing research from Professor Roth's laboratory, University of Bayreuth, Germany, and Professor Turek's laboratory, Clausthal University of Technology, Germany**

Highly selective Ag foam gas diffusion electrodes for CO<sub>2</sub> electroreduction by pulsed hydrogen bubble templation

The new method generated polymer-based Ag-DHBT-GDEs through electrochemical Ag catalyst deposition on a sputtered Ag-GDL. Coating an insulating polymer fabric with a conductive layer maintained the crucial porous structure for CO<sub>2</sub> electrolysis. Pulsed Dynamic Hydrogen Bubble Templatation (PC) outperformed galvanostatic deposition (DC), exhibiting higher mass loading and ECSA values, surpassing DC-DHBT-GDEs at relevant current densities. Furthermore, perfluorosulfonic acid ionomer infiltration enhanced CO<sub>2</sub> transport without causing flooding, contributing to performance improvement.

Image designed and illustrated by Jens Osiewacz.

**As featured in:**



See Hendrik Hoffmann *et al.*,  
*EES. Catal.*, 2024, 2, 286.