Dr. Bartu Karakurt

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Bartu Karakurt received his BSc and MSc degrees in Chemistry from Bilkent University, Turkey, after which he joined École polytechnique fédérale de Lausanne (EPFL), Switzerland, to pursue his doctoral studies. During his doctoral studies, he led an interdisciplinary project between the Department of Chemistry and Chemical Engineering and the Institute of Electrical and Microengineering, focused on developing scalable micro-plasma devices for low-power and electrified CO_2 valorization, as well as the investigation and modelling of process-relevant reaction kinetics underlying complex plasma–chemical reactions. His work combined cleanroom microfabrication with electrified CO_2 valorization to enable on-chip CO_2 recycling tailored to both point-source and decentralized carbon dioxide valorization applications.

Dr. Karakurt is currently an Industrial Postdoctoral Fellow at the Paul Scherrer Institute (PSI), Switzerland and he is working in collaboration with a leading global petrochemical company. His current research focuses on developing chemical looping technologies for low-temperature dehydrogenation of short-chain alkanes, targeting energy-efficient, electrified routes for the production of commodity chemicals.