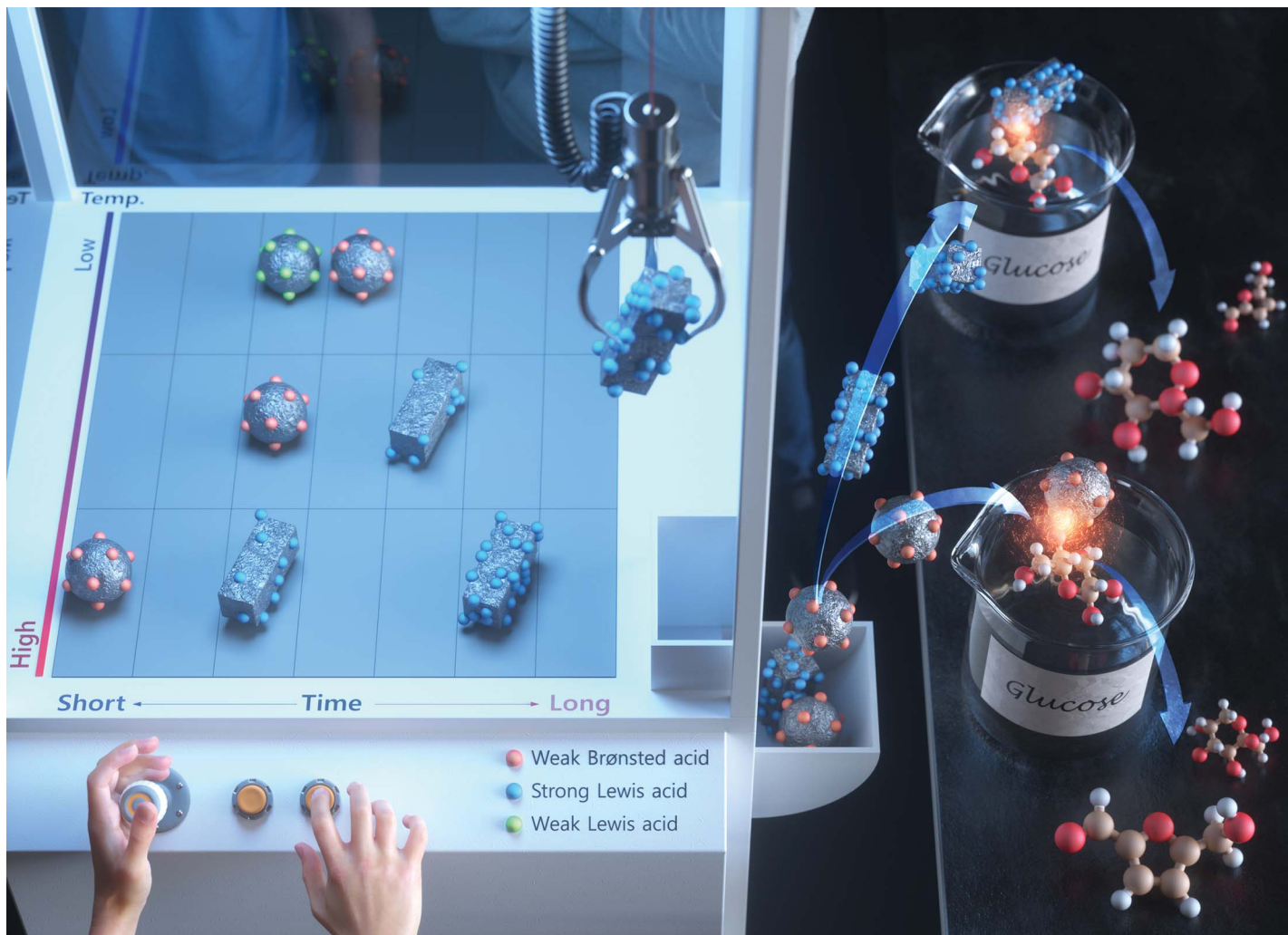


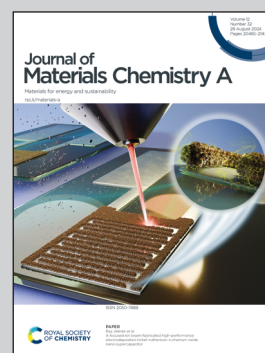


**Showcasing research from Professor Park's laboratory,
Department of Energy and Chemical Engineering, Incheon
National University, Incheon, Korea.**

A nickel silicate MFI-type zeolite catalyst prepared by interzeolite transformation: tailoring the catalytic active sites for glucose conversion

MFI-type nickel silicate (Ni-MFI) was prepared through the interzeolite transformation of MWW-type nickel silicate at various crystallization temperatures and times. Distinct kinetics of structural transformation and stabilization of framework Ni species governed by these temperatures and times facilitated certain silanol groups along with the chemical states of framework Ni species. Consequently, we tailored the Lewis-Brønsted bi-acidities of Ni-MFI catalysts by controlling the formation of silanol groups and isolated framework Ni species, which were selective to fructose and 5-HMF in the glucose conversion.

As featured in:



See Min Bum Park *et al.*,
J. Mater. Chem. A, 2024, **12**, 20894.