

Showcasing research from Professor Migowski's laboratory, Institute of Chemistry, UFRGS, Porto Alegre, Brazil.

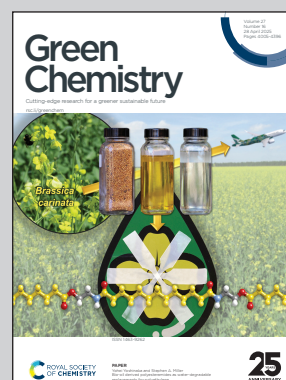
Zwitterionic alcoholic solutions for integrated CO_2 capture and hydrogenation

The catalytic hydrogenation of CO_2 to formate and methanol was achieved via ICCU using zwitterionic bases (ZBs) in alcohols. Unlike tertiary amines with similar $\text{p}K_{\text{aH}}$, ZBs effectively captured CO_2 . The ZB/isopropanol system with *cis*- $[\text{Ru}(\text{dppm})_2\text{Cl}_2]$ catalyst showed outstanding activity for formate formation at 50 °C and 10 bar H_2 . Methanol was produced using ZB, ethyleneglycol, and Ru-MACHO-BH at 140 °C and 70 bar H_2 .

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See Pedro Migowski *et al.*, *Green Chem.*, 2025, **27**, 4190.