

Supplementary Information for

**The promoting effect of a dicyanamide based ionic liquid in the selective hydrogenation
of citral**

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Table S1 Physisorption data for various catalysts

catalyst		S_{BET} (m^2/g)	V_{pore} (mL/g)
Pd/SiO ₂	prior to reaction	313	0.89
	after reaction IL-free	283	0.81
	after reaction IL as additive	231	0.67
[BMIM][DCA] coated Pd/SiO ₂	prior to reaction	259	0.75
	after reaction	248	0.69

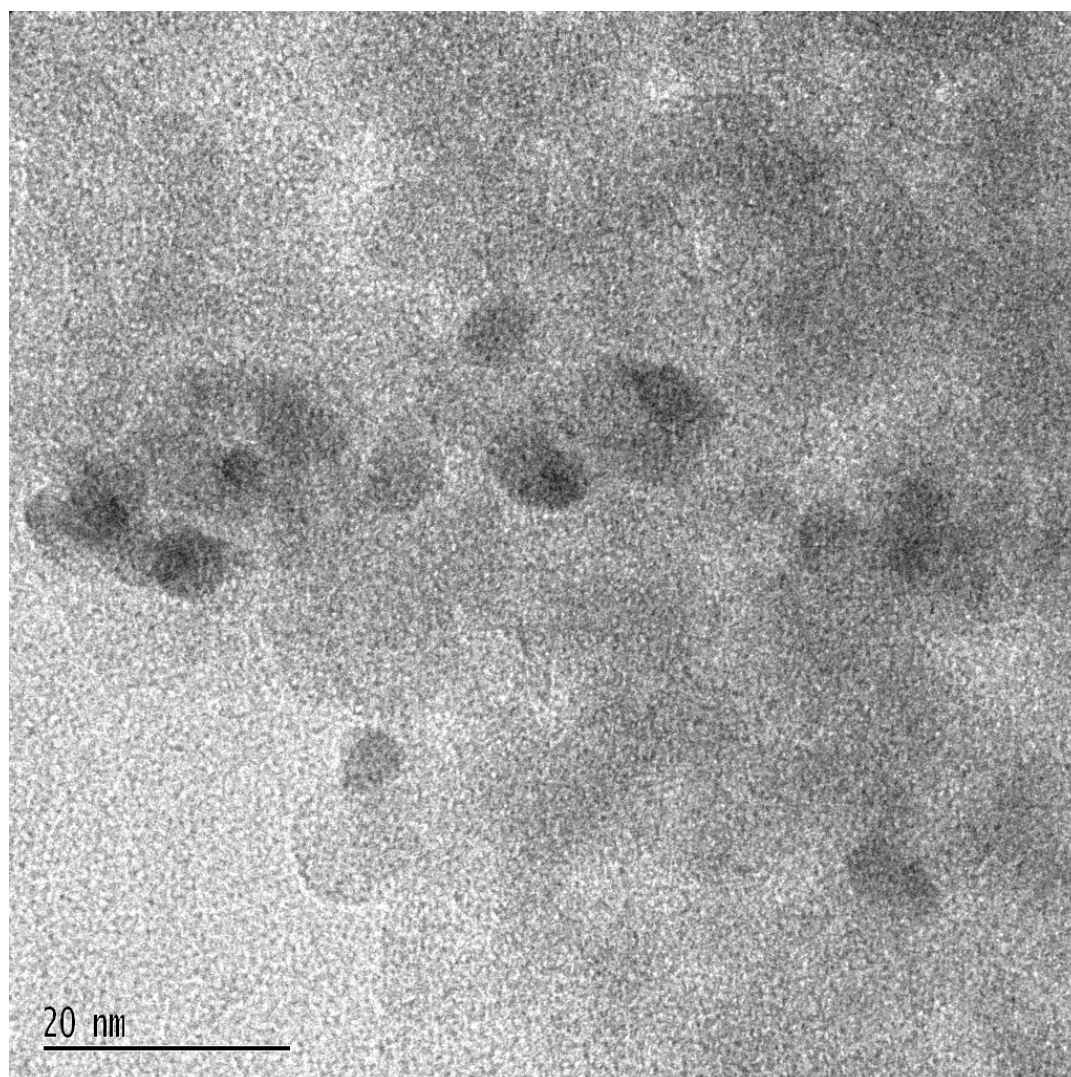


Figure S1 TEM photograph of Pd/SiO₂, 300,000x magnification.

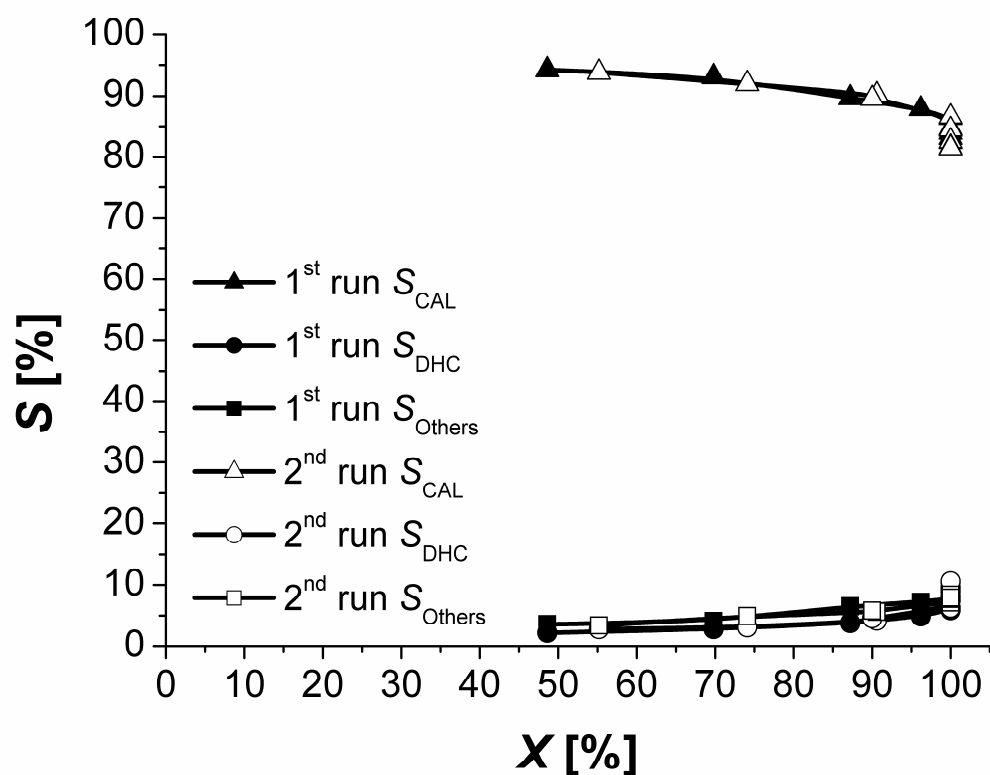


Figure S2 Catalyst recycling, selectivity vs. conversion (conditions: 323 K, 250 mg Pd/SiO₂-SCILL, $c_{\text{Citral},0} = 1.1 \text{ mol/L}$, 2.0 MPa H₂).

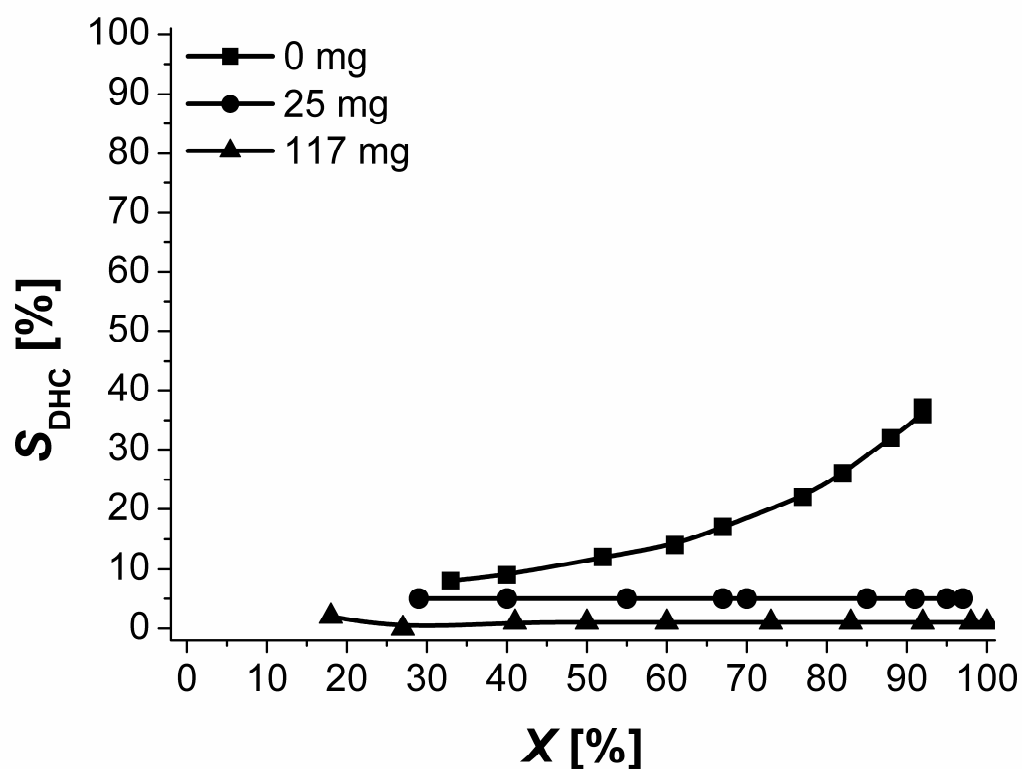


Figure S3 Dihydrocitronellal selectivity vs. conversion plot for different [BMIM][DCA] quantities during citral hydrogenation (conditions: 323 K, 250 mg Pd/SiO₂, $c_{Citral,0} = 1.1$ mol/L, 2.0 MPa H₂).

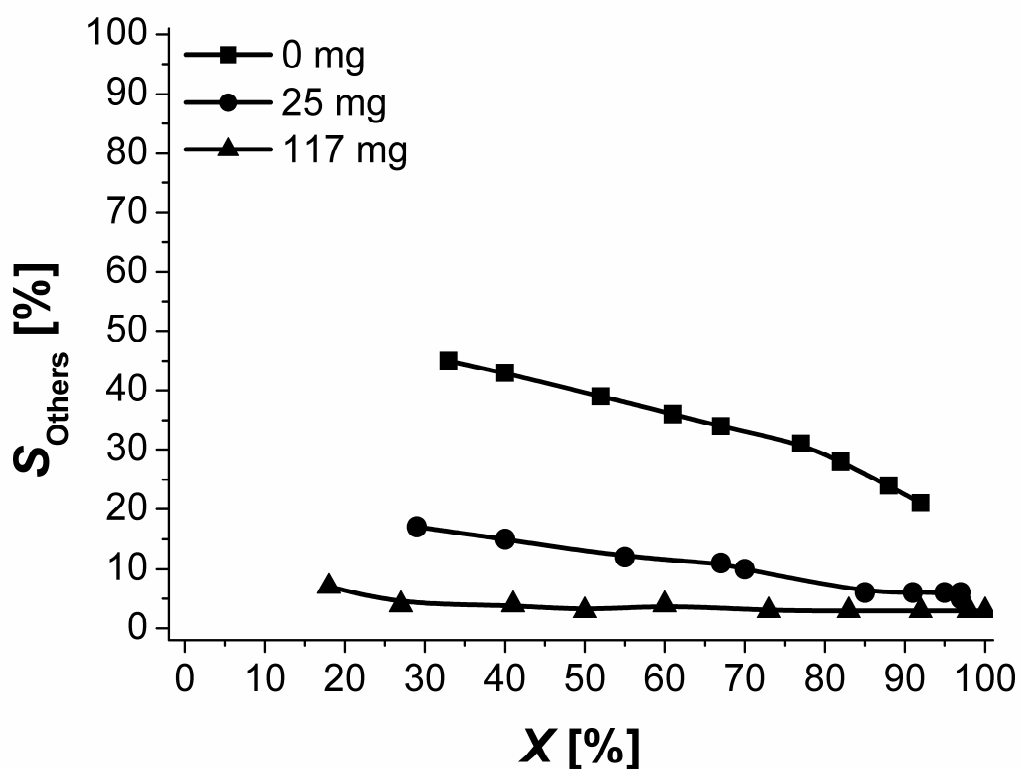


Figure S4 Selectivity other Products^a vs. conversion plot for different [BMIM][DCA] quantities during citral hydrogenation (conditions: 323 K, 250 mg Pd/SiO₂, $c_{\text{Citral},0} = 1.1$ mol/L, 2.0 MPa H₂), ^a 3,7-dimethylocta-2,7-dienal, isopulegol and non-identified products.