

Avoiding hot-spots in Microwave-assisted Pd/C catalysed reactions by using the biomass derived solvent γ -Valerolactone

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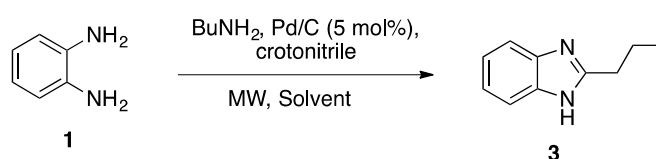
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Supporting Information





Figure S1. Examples of MW tubes after hot spot formation



Entry	Medium	Conv. (%) ^b
1 ^a	Toluene	50%
2 ^{a,b}	CPME	20%
3 ^{a,c}	EtOH	18%
4 ^d	NMP	81%
5 ^d	GVL	89%

Table S1. Synthesis of benzimidazole in different solvents. [a] Reaction conditions: o-phenylenediamine (1) (0.28 mmol), BuNH₂ (0.36 mmol), crotonitrile (0.57 mmol), solvent (1.6 mL), MW, 170 °C, 20 min; [b.] Maxim temperature reached 140 °C; [c.] Maxim

temperature reached 120 °C. d. Conditions: *o*-phenylenediamine (0.28 mmol), buthylamine (0.36 mmol), crotonitrile (0.57 mmol), solvent (0.8 mL), MW, 170 °C, 20 min.

Power	T (1 min)	T (5 min)	T (10 min)
50 W	61 °C	134 °C	153 °C
100 W	79 °C	181 °C	200 °C
150 W	94 °C	219 °C	239 °C
200 W	110 °C	249 °C	269 °C

Table S2. Recorded temperature during the MW irradiation of 4 mL of GVL at fixed 50, 100, 150 and 200 W.