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Supporting Information

Catalytic activity of Pd/ hydrophilic phosphine ligand in the interface of an aqueous-phase Cu-free Sonogashira coupling

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Table S1. Reagent solution preparation

Compound	Quantity	Function	Phase
DTBPPS	0.16 mmol	Ligand	Aqueous
CsOH·H2O	8.75 mmol	Base	Aqueous
Deionized water	442.9 mmol	Solvent	Aqueous
PdCl2(CH3CN)2	0.16 mmol	Pd pre-catalyst	Organic
Acetonitrile	153.1 mmol	Solvent	Organic
4-bromobenzotrifluoride	8 mmol	Halide	Organic
Phenylacetylene	8.75 mmol	Alkyne	Organic
Mesitylene	5.74 mmol	GC standard	Organic



Figure S1. A process and instrumentation diagram for the experiment performed.

Thermal Analysis:

The image below was taken with a 7-14 micron ICI 9640 IR camera and overlaid with a COMSOL Multiphysics simulation of the temperature of each microwell, demonstrating good agreement between the theoretical design and practical operation of the reactor system. The temperature is a standard research scale from room temperatures (blue) to 85 °C (red).



Figure S2. Enlarged view of a thermal image of the microreactor-chuck assembly overlaid with a COMSOL simulation of the same geometry.