

Supporting Information

Development of a Continuous-Flow Sonogashira Cross-Coupling Protocol using Propyne Gas under Process Intensified Conditions

Desiree Znidar,[†] Christopher A. Hone,^{†,‡} Phillip Inglesby,[§] Alistair Boyd,[§] and
C. Oliver Kappe^{*,†,‡}

[†] Institute of Chemistry, University of Graz, NAWI Graz, Heinrichstrasse 28, A-8010 Graz, Austria

[‡] Research Center Pharmaceutical Engineering GmbH (RCPE), Inffeldgasse 13, 8010 Graz, Austria

[§] AstraZeneca, Silk Road Business Park, Macclesfield SK10 2NA, United Kingdom

Contents

1. Flow reaction set-ups.....	2
2. ¹ H-NMR and ¹³ C-NMR spectra.....	3

1. Flow Reaction Set-ups

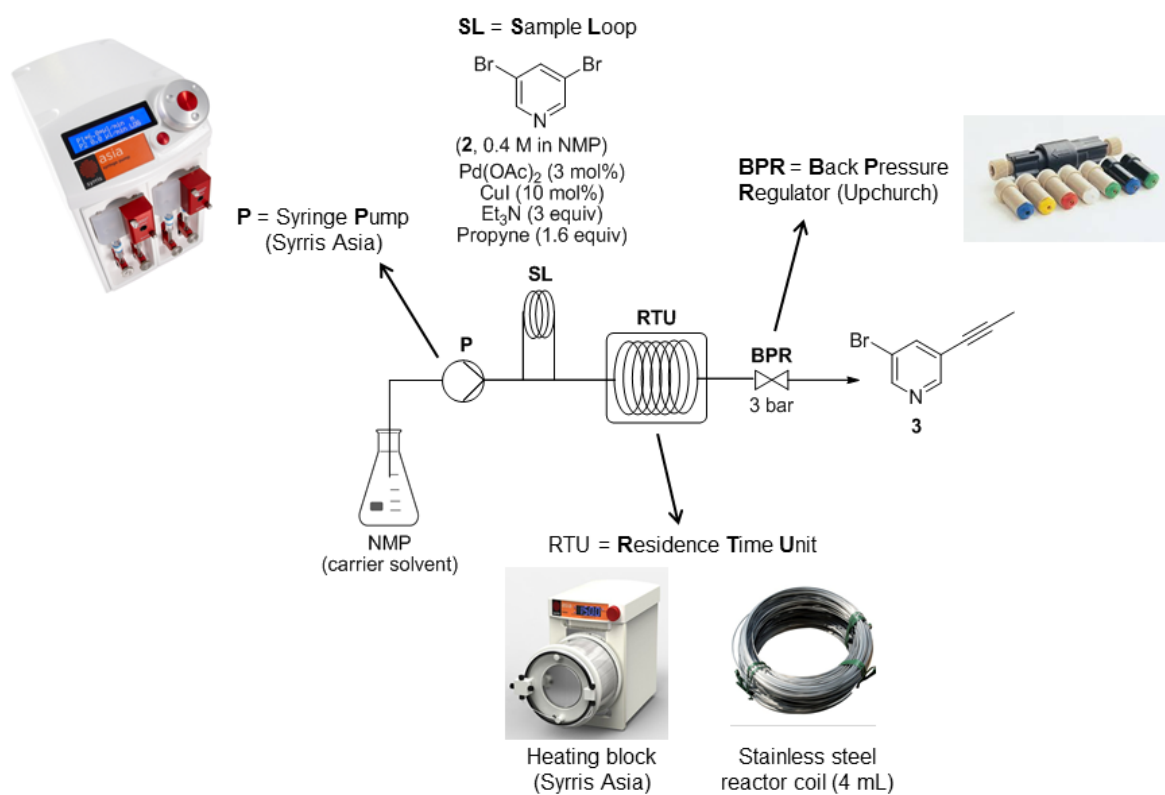


Figure S1. Continuous-flow setup (schematic).

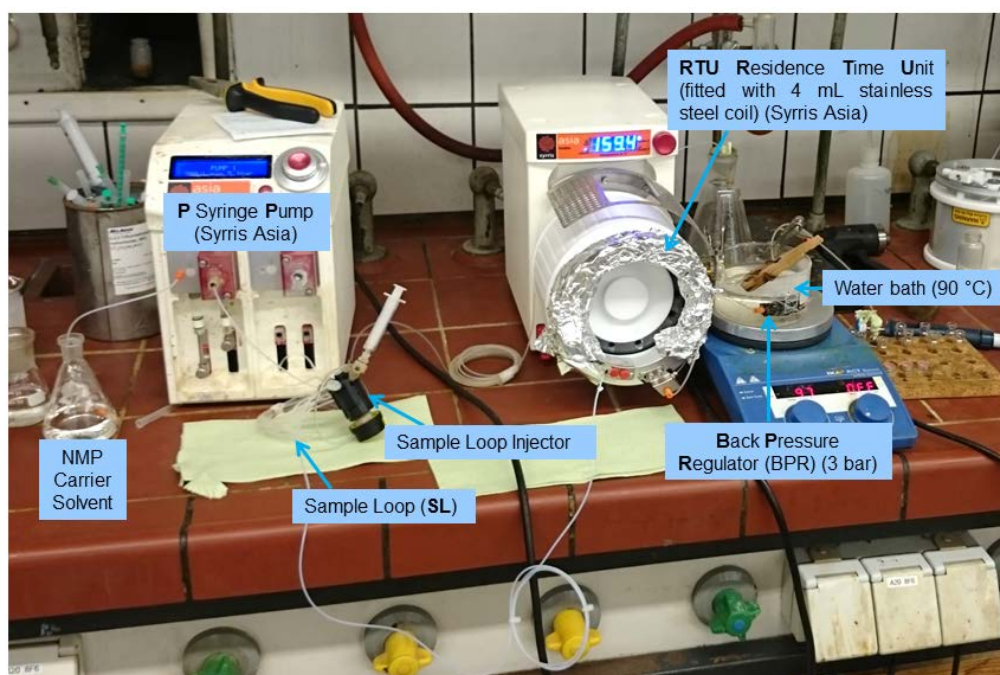


Figure S2. Image of continuous-flow setup.

2. ^1H -NMR and ^{13}C -NMR Spectra

Product **4** was isolated for NMR analysis using the same purification procedure as described for product **3**. ^1H NMR (300 MHz, CDCl_3) δ ppm 8.54 (d, $J = 2.2$ Hz, 1H), 8.51 (d, $J = 1.7$ Hz, 1H), 7.81 (t, $J = 2.0$ Hz, 1H), 2.42 (t, $J = 7.0$ Hz, 2H), 1.65–1.40 (m, 4H), 0.95 (t, $J = 7.2$ Hz, 3H). ^{13}C NMR (75 MHz, CDCl_3) δ ppm 150.5, 149.2, 140.9, 122.8, 120.1, 95.9, 76.2, 30.6, 22.1, 19.3, 13.7.

