Supporting Information

Intensified Azeotropic Distillation: a Strategy for Optimising Direct Amidation

Christophe Grosjean^{*†}, *Julie Parker*[‡], *Carl Thirsk*[†] and *Allen R. Wright*[‡]

LyraChem Ltd, St Thomas Street Stables, St Thomas Street, Newcastle-upon-Tyne, NE1 4LE, UK

E-mail: christophe.grosjean@lyrachem.com

† LyraChem Ltd

^{*}School of Chemical Engineering and Advanced Materials, Merz Court, Newcastle University, Newcastle-upon-Tyne, NE1 7RU, UK

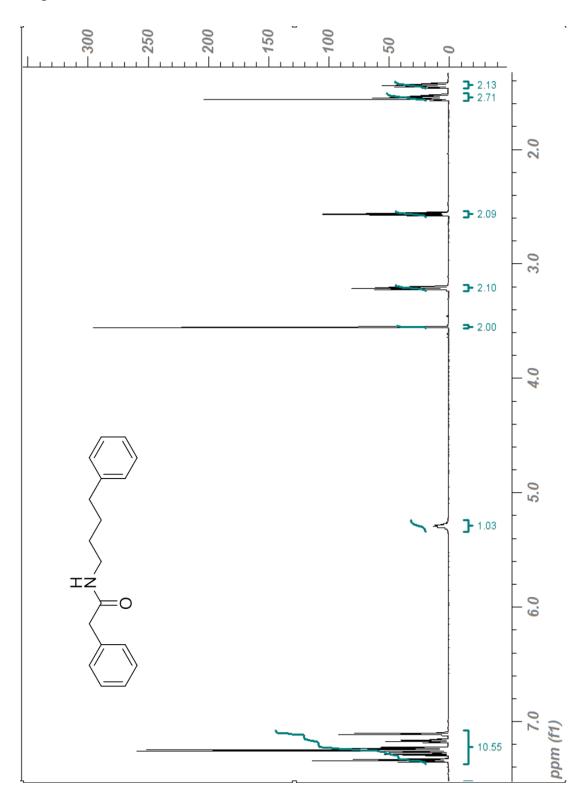
Table of Content

N-4-phenylbutyl-phenylacetamide characterization data

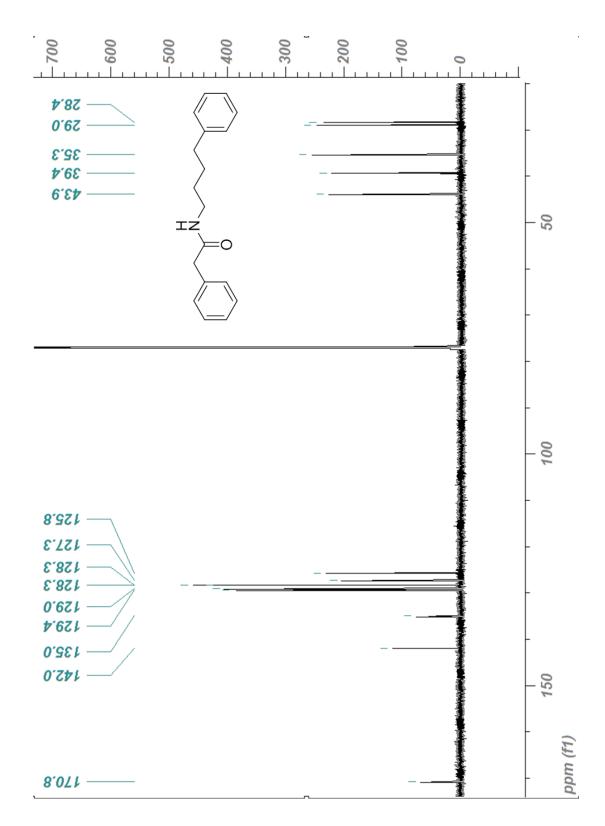
- ¹H NMR spectrum
- ¹³C NMR spectrum
- GC chromatogram
- Electrospray MS results

Productivity Calculations for a Train of CSTR's and a Batch Reactor

¹H NMR spectrum

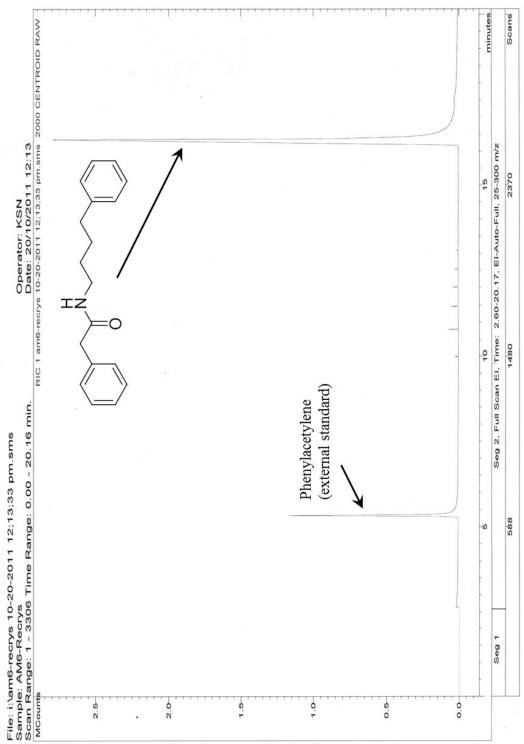


2



3

GC chromatogram

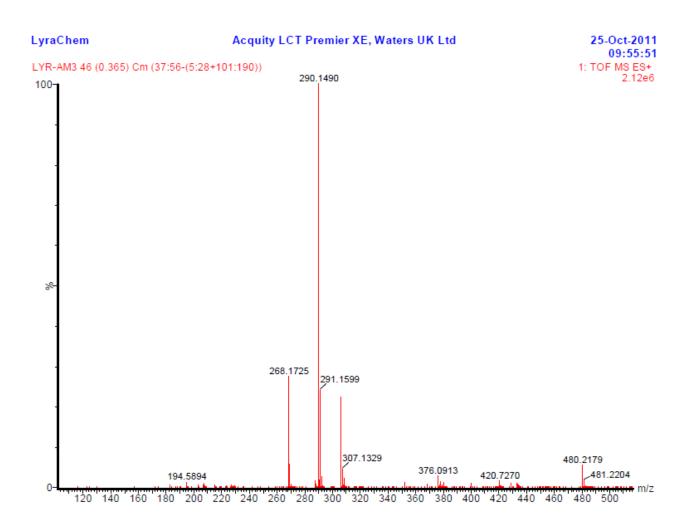


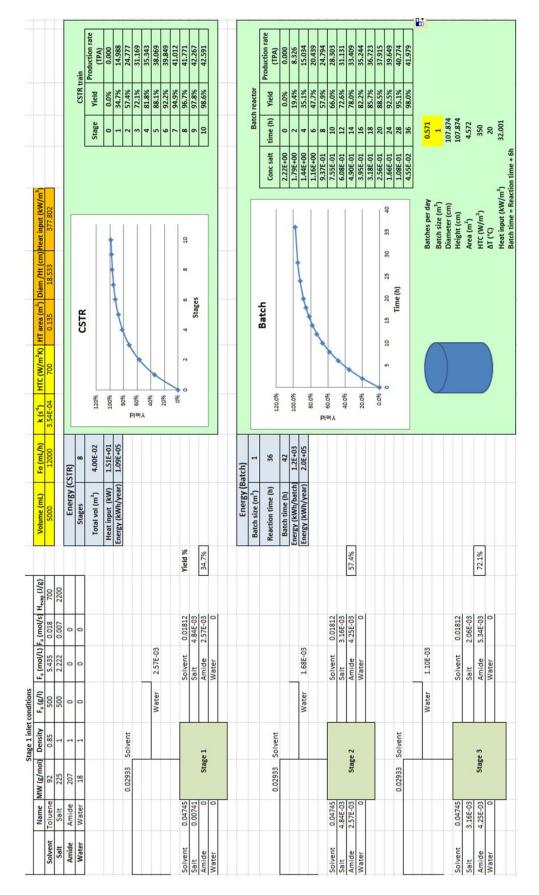
Chromatogram Plot

4

Electrospray MS Results

1 mg of sample was diluted to 1 mL with acetonitrile. This was further diluted 1/100 in acetonitrile.





Productivity Calculations for a Train of CSTR's and a Batch Reactor