

Bristol ChemSpeed Robotic Synthesis – Experiment/Project Application Form

Please fill in the details below and submit this form to: **XXXXXXXXXXXX**.

After validating your proposal we will contact you to discuss scheduling, costs and practicalities of your experiments. Please note the following:

- Users must provide all chemicals and consumables required to conduct experiments
- Academic users will be trained to run their own experiments by UoB technical support
- All reaction data will be stored and retained following UoB standard protocols
- Users will be requested to contribute to cost of repairs arising from their usage.

Name: James Fordham and Rory Mykura

Group/Company: University of Bristol

Email Address: example@bristol.ac.uk

Experiment/Project Name: Hydrogenation of nitrobenzene

Grant code/cost centre: **XXXXXXXX**

(Users must pay consumables costs for their reactions. Academic projects will not be charged for usage time but future **grant proposals must include costings** for this system).

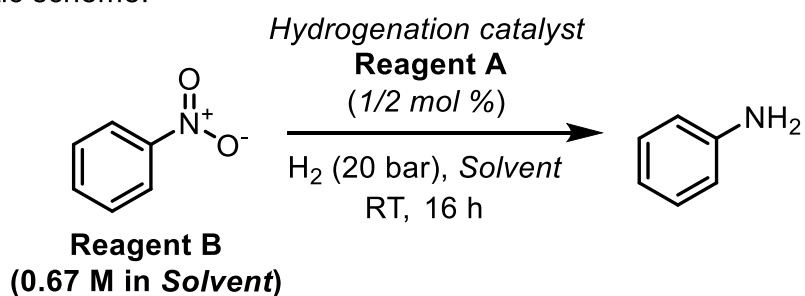
Aims of the experiments (proof-of-principle, catalyst/conditions screen, etc) and any pertinent details e.g. when would you like to conduct the experiments, what are the likely benefits of the robot etc.

Optimisation of hydrogenation: Hydrogenation using Chemspeed platform.
Screening of different catalysts, catalyst loadings, different solvents

Desired date of use: 14/1/19 to 18/1/19.

Synthetic scheme, including reagents and conditions/times (add additional sheet if required) and anticipated workflow

Synthetic scheme:



- Number of variables (e.g. reagent, catalyst, stoichiometry) to be explored?
3 variables = catalyst loading (1 and 2 mol%), catalysts (x 4), solvents (x 3)
- Total number of reactions?
2 different loadings x 4 catalysts x 3 solvents = 24 reactions
- Scale of reactions? (Check description of equipment)
0.15 mmol of Reagent B, total volume = 0.225 mL
- Reaction time?
16 h
- Solid dispensing? (Check description of equipment)
Yes, 24 x (1.8 – 6.2 mg)

Please conduct a full risk assessment (attached separately) and note here any particular safety/risk concerns you have identified

Use of high-pressure gas (20 bar)

Use of hydrogen

Toxic starting material and product