

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: Automated Click Chemistry – Synthesis of a Triazole Library

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).

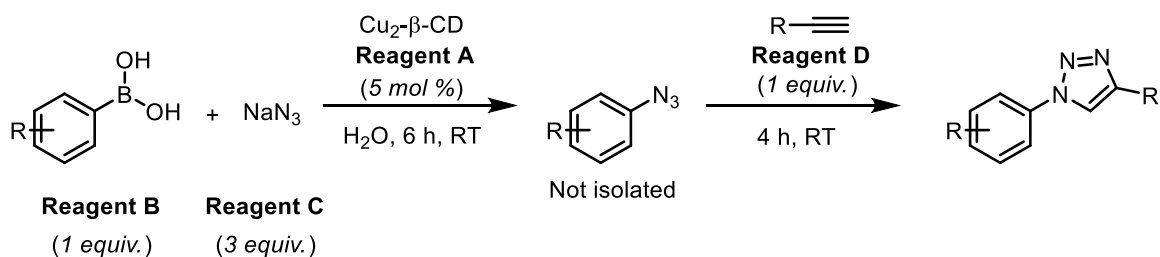
Aims of the experiments (proof-of-principle, catalyst/conditions screen, etc) and any pertinent details e.g. when would you like to conduct the experiments, what are the likely benefits of the robot etc.

Library Synthesis: Synthesis of a Triazole Library
Screening of different starting boronic esters and alkynes in a fully optimized fashion

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?
2 variables = 8 boronic acids and 4 alkynes
- Total number of reactions?
8 boronic acids x 4 alkynes = 32 reactions
- Scale of reactions? (Check description of equipment)
0.05 mmol of Reagent B, total volume = 0.15 mL
- Reaction time?
10 h
- Solid dispensing? (Check description of equipment)
Yes, 32 x (5.0 – 10.0 mg) for the boronic acid
32 x (10.0 mg) for the sodium azide

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

Use of sodium azide