Project Title	Injectable brain machine interfaces
Supervisor	Dr Rylie Green
Theme(s)	Regenerative Medicine and Biomaterials Medical Devices
Project Type	Desk based
Project Description	Deep brain stimulation (DBS) therapy has seen increasing clinical relevance in the last decade. DBS and similar therapeutic techniques require the use of a chronically implanted neural electrodes. This project is focused on the development and characterisation of a minimally invasive, organic, neural electrode system. This electrode system is based on an injectable hydrogel functionalized to facilitate the in-situ electrochemical deposition of conducting polymer directly inside the brain to enable recording and stimulation of neural activity. Initial work will focus on the mechanical, electrochemical and biological characterization of the polymeric electrode system before progressing to investigating in-situ depositions in ex-vivo brain tissue.