

FACILITIES/EQUIPMENT



We have also access to the machine, glass, and electronic shops of both the Schools of Chemistry and Biochemistry and Chemical & Biomolecular Engineering; these include a well equipped NMR center with four high-field solution NMR spectrometers and two solid state NMR spectrometers. A high resolution mass spectrometry laboratory is also available that is capable of several analytical techniques using the following mass spectrometers: VG Instruments

70SE [ionization by electron impact (EI), chemical ionization (CI), and fast atom bombardment (FAB)], Micromass ToFSpec 2E [matrix assisted laser desorption/ionization (MALDI) and time of flight (TOF) separation], and Micromass Quattro LC [electrospray ionization (ESI) or atmospheric pressure CI (APCI) as well as tandem mass spectrometry (MS/MS) are possible].

Also available for this project are the facilities and expertise of the Specialty Separations Center, which has membership Chemical & Biomolecular Engineering, Chemistry and Biochemistry, Civil and Environmental Engineering, Mechanical Engineering, and the Georgia Tech Research Institute. Currently 14 faculty and about 100 students work on separation projects and sustainable technology within this center.

Equipment: We have now a great deal of equipment already available at Georgia Tech for this project from previous grants and from Georgia Research Alliance funding for environmental control. These include:

- All equipment needed for synthesis and purification of compounds
- Gas Chromatograph
- Gas Chromatograph with MS
- TGA_DSC
- HPLC
- Karl Fisher Apparatus
- Glove Box
- Fluorescence Spectrometer
- Many Phase equilibrium apparatuses
- Two UV-vis Spectrometers
- ASPEN Design Program