

SGUnited Traineeship – Research Apprentice for energy storage device research

Job Title:	Research Traineeship
Job Description:	This position relates to experimental research in the field of energy storage devices. Our group recently discovered monolithic graphene foam structure which has high conductivity & mechanical strength. This role will focus on the synthesis and characterisation of graphene foam, as well as the fabrication of supercapacitor & battery devices for industry projects.
The trainees will gain exposure to the following functional areas:	<ul style="list-style-type: none">• Synthesis & processing of graphene foam• Characterisation techniques applicable to material research (AFM, SEM, Raman, XPS, FTIR, etc.)• Data analysis and experimental reports• Industry collaboration for Supercapacitor and battery development
Specific Responsibilities:	<ol style="list-style-type: none">1. Conduct thorough literature review on latest electrode materials for improving device performance of supercapacitor and battery2. Engineering 3D porous materials by developing new synthesis parameters and sample characterisation.3. Fabrication of supercapacitor device to support academic and industry collaborations.
Competencies trainee will learn during SGUnited Traineeship Programme:	<ol style="list-style-type: none">1. Active participation in research projects and trained to be independent in driving individual projects. This includes experiment planning, data analysis, identifying research significance and insights.2. Understand the principle of advanced equipment for advanced porous material research.3. Trained in material characterisation and fabrication tools used in cutting-edge energy storage industry and research.
Qualifications:	<ol style="list-style-type: none">1. Bachelor's/Master's Degree in Physics/Material Science and Engineering/Chemical Engineering/Chemistry or related areas2. Prior research experience in nanomaterials/energy storage device would be favourably considered3. Effective oral and written communication skills