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Investigation of Defect Formation in Multi-layer Graphene under Radioactive Irradiation PUBUDU GALWADUGE, JOSEPH LAMBERT, ROBERTO RAMOS, Drexel University — Graphene is a two-dimensional crystal experimentally observed in its free standing form a few years ago. With a record-high electron mobility, it has been suggested as a replacement for silicon in the fabrication of electronic devices. Electronic devices such as superconducting transistors and room temperature single electron transistors have been fabricated using graphene. In addition, it has been demonstrated that energetic particles such as electrons and ions can cause defect formation on graphene. We propose to study defect formation on graphene and graphite under radioactive irradiation using Raman Spectroscopy. We also report on the progress of measuring electronic transport properties using four probe lock-in measurements.

Pubudu Galwaduge
Drexel University

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