Defense Announcement

Characterization of CVD grown mono and few layer Graphene using microwave dielectric reson

Sasidharan Prakas

Degree: **MS, Electrical Engineering**

Date: 04/26/2016 Time: 2.00 pm

Location: ECE small conference room (N358)

Committee Chair: Dr. Steven Pei

Committee Members: Dr. Francisco C. Robles He
Dr. Jinghong Chen

Right from its successful isolation, Graphene has never failed to surprise people with its never ending potential to exhibit extraordinary properties. Even though the number of publications dedicated towards graphene increases exponentially, there has been something always putting the graphene away from wide variety of possible applications especially in the electronic industry. High temperature requirement for the synthesizing of graphene is one of the major drawbacks for the electronic industry. But, synthesizing few layer graphene is now possible at lower temperatures of 400 ^{o}C using modern plasma based CVD systems, when compared to the conventional CVD which uses temperature more than 1000 ^{o}C. This study here is to analyze the electronic property variation, especially sheet connductance, between monolayer and few layer graphene under high frequency environment using a microwave dielectric resonator. Provided that, few layer graphene has comparable sheet conductance with the monolayer graphene, then it will be a big step towards putting up graphene into many possible application at industrial scale.