

INSPEM'S ONLINE WEEKLY SEMINAR

DATE: 25 SEPTEMBER 2020 | TIME: 3.15 PM MEDIUM: VIDEO CONFERENCE (GOOGLE MEET)

https://meet.google.com/myd-ecux-diz



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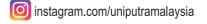
Topic : Growth of Large-Area Graphene on Copper Substrate using Refined Cooking Palm Oil by Spray Injector Assisted-Chemical Vapor Deposition

ABSTRACT

This research present a synthesis of large-area single-layer graphene on copper substrate using a refined cooking palm oil, a natural single carbon source, by a home-made spray injector-assisted chemical vapor deposition system. The effects of the distance between spray nozzle and substrate, and growth temperature are studied. From Raman mapping analysis, shorter distance of 1 cm and temperature of around 950 °C lead to the growth of large-area single-layer graphene with a coverage up to 97% of the measured area size of 6400 µm2. The crystallinity of the grown single layer graphene is relatively good due to high distribution percentage of FWHM values of 2D band that is below 30 cm-1. However, the defect concentration is relatively high, and it suggests that a flash-cooling technique needs to be introduced.

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