Synthesis of graphene on copper using chemical vapor deposition

Nay Soe Aung, Myint Naing Oo, Zaw Tun Lwin, Win Soe

Science and Technology Research Center, Pyin Oo Lwin, Myanmar nick-ong@supplierglobal.com

Graphene is a potentially important material in the application of semi-conductors, optoelectronics, graphene based batteries, etc. A brief account of graphene production is presented in this paper. A copper layer of 50nm is deposited on silicon substrate in the E-bean evaporator. Graphene synthesis takes place in the CVD process on the obtained copper layer of silicon substrate at a temperature of 900°C-1000°C in the environment of hydrogen and argon, followed by methane flow. Characterization is conducted by using SEM and Raman Spectroscopy. Dependency of graphene growth on the flow of hydrogen is analyzed in this paper.

References

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