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Re: "*Probing C84-embedded Si substrate using scanning probe microscopy and molecular dynamics*", by Mon-Shu Ho, Chih-Pong Huang, Che-Fu Chou, Wen-Jay Lee

Dear Editor

Thank you for your interest in our research and invite us to submit our research protocol to your journal. We are pleased to submit the above titled manuscript for your kind consideration for publication in the "*Journal of Visualized Experiments*" as an article. The following is a brief description of the work and why we think it merits publication in this journal.

It is well known that the SiC has a wide bandgap semiconductor with extreme properties such as wear/corrosion resistivity, high breakdown field, high current density and high thermal conductivity, which make it a promising material for device applications that are integral to high-temperature, high-power circuit elements. In recent year, C84 molecules can be further embedded into a silicon substrate surface and form a hexagonal closed-packed array on the silicon substrate, which has been found to serve as a successor to silicon carbide materials.

In the present article, the protocol shows the fabrication of a C84-embedded Si substrate heterojunction and subsequent analysis to obtain a comprehensive understanding of the electronic, optoelectronic, mechanical, magnetic, and field emission properties of the resulting materials. We also addressed the issue of using numerical simulation to predict the characteristics of nanomaterials, through the novel application of molecular dynamics calculations.

We certify that this is an original work that has not been submitted elsewhere for publication. We hope that our manuscript meets the high standards of your journal. We are looking forward to receiving a favorable response from your regarding the acceptance of our manuscript. Thank you for your time and consideration.

Sincerely yours,

Wen-Jay Lee