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Growth of 2D black phosphorus film from chemical vapor deposition

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Phosphorene, a novel 2D material isolated from bulk black phosphorus, is an intrinsic p-type material with a variable bandgap for a variety of applications. However, these applications are limited by the inability to isolate large films of phosphorene. Here we present an *in situ* chemical vapor deposition type approach that demonstrates progress towards growth of large area 2D black phosphorus. Some other structures will be discussed as well.

Biography

Hai-Feng Ji is currently Professor in the Department of Chemistry at Drexel University. His research interests focus on micro/nano biosensors, MEMS devices, surface modification for sensors, and nanoassembly of organic molecules. He is currently a co-author of more than 120 peer-viewed journal articles and book chapters.

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