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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