Technology and processes for scaled up fabrication of 2D materials and heterostructures

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Abstract

Vapour deposition techniques have gained a lot of interest for growth of two dimensional (2D) materials[1-4]. In the recent past there has been a surge in the number of researchers studying atomic planes of other Van der Waals solids and heterostructures created by stacking layers with complementary characteristics to achieve novel functionality [5]. For successful scaling up of prototypical applications demonstrated to date, technologies and processes for large area deposition of these materials need to be developed. In this talk I will first give an overview of technologies and processes developed at Oxford Instruments towards growth of 2D materials and heterostructures by CVD and ALD followed by our developments in technology for device fabrication processes such as dielectric deposition and device pattern etching.

References

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