

Advances in the large-scale production of 2D crystals

Francesco Bonaccorso^{1,2}

¹BeDimensional SpA, Via Lungotorrente Secca 30R, 16163 Genova, Italy

²Istituto Italiano di Tecnologia, Graphene Labs, Via Morego 30, 16163 Genova, Italy

f.bonaccorso@bedimensional.it

Abstract

Nowadays is of utmost importance the development of industrial-scale, reliable, inexpensive production processes of graphene and related two-dimensional materials (GRMs).[1,2] In fact, this is a key requirement for their widespread use in several application areas,[1-6] providing a balance between ease of fabrication and final product quality. In particular, in the energy sector, the production of GRMs in liquid phase [2,6] represents a simple and cost-effective pathway towards the development of GRMs-based energy devices, presenting huge integration flexibility compared to other production methods.

In this presentation, I will present the strategy of BeDimensional in the production of GRMs by wet-jet milling [7] and the Industrial scale up. Afterward, I will provide a brief overview on some key applications of the as-produced GRMs, for anticorrosion coatings and energy conversion[3,8-11] and storage[8,12-16] devices.

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