
Industrial production of high-quality 2D crystals for energy applications

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In this presentation we will provide an overview of the strategy of BeDimensional in the development of industrial-scale, reliable, inexpensive production processes of graphene and related two-dimensional materials (GRMs).[1-3] This is a key requirement for their widespread use in several application areas,[1-8] providing a balance between ease of fabrication and final product quality. In this context, we will show the effectiveness of the production of GRMs by wet-jet milling [3] and the route towards future Industrial scale up, maintaining the high-quality production ruled by the ISO standard.

Afterward, we will provide a brief overview on some key applications of the as-produced GRMs, with particular focus on the energy sector. In this context, the production of GRMs in liquid phase by wet-jet milling [2,3] represents a simple and cost-effective pathway towards the development of GRMs-based energy devices, presenting huge integration flexibility compared to other production methods. We will provide an insight into some application areas such as anticorrosion coatings and energy conversion and storage devices. [4,8-16]

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