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## 2D-crystals-based composites for energy applications

Graphene and other 2D crystals are emerging as promising materials<sup>1-5</sup> to improve the performance of existing devices or enable new ones.<sup>1-5</sup> A key requirement for flexible electronics or energy applications is the development of industrial-scale, reliable, inexpensive production processes,<sup>2</sup> while providing a balance between ease of fabrication and final material quality.

Solution-processing<sup>2,6</sup> is a simple and cost-effective pathway to fabricate various 2D crystal-based (opto)electronic and energy devices, presenting huge integration flexibility compared to conventional methods. Here, I will present an overview of graphene and other 2D crystals for flexible and printed (opto)electronic and energy applications, starting from solution processing of the raw bulk materials,<sup>2</sup> the fabrication of large area electrodes<sup>3</sup> and their integration in the final devices.<sup>7,8,9,10,11,12</sup>

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