

Large Scale Production of Graphene Materials and the Applications in Highly Efficient Energy Storage

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Graphene and related materials have attracted much attention in the various fields with expect of using many exotic properties. The large-scale production of graphene materials have been the key for the industrial applications and commercialized graphene products. In the talk, I will summarize the effort taken in the Sixth Element Materials Technology Inc., Ltd. for the large scale production of graphite oxide and CVD graphene, and related products. In addition, for the practical application of graphene or other 2D materials in energy storage devices, 3D architectures of 2D platelets shall be designed for achieving the comprehensively useful performance of the devices. The other part of the talk includes an approach combining self-assembly and chemical processing developed for high volumetric performance of supercapacitor electrodes, high rate Li-ion battery electrodes and novel carbon monoliths with potentially new physical properties.

References

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Figures

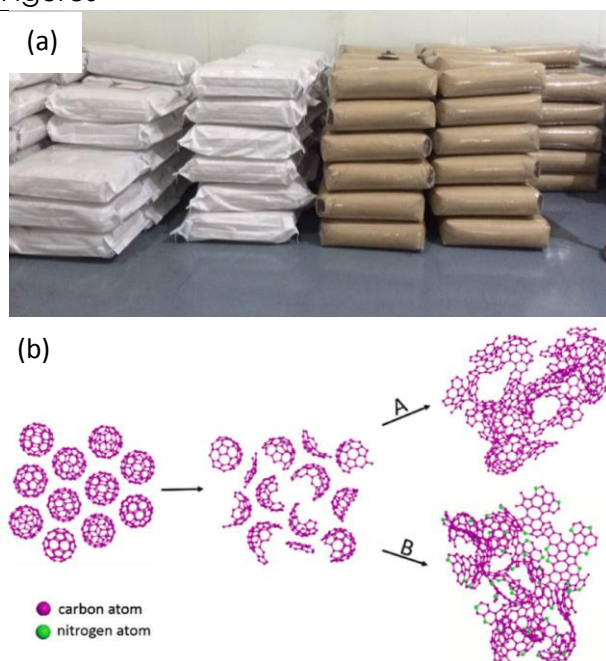


Figure 1: (a) Large-scale graphene powders and (b) novel carbon made from C60.