

Commercialization of graphene and other 2D materials

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Atomically thin 2D Transition metal dichalcogenide (TMD) materials provide a wide range of basic building blocks with unique electrical, optical, and thermal properties which do not exist in their bulk counterparts. Our recent demonstration in vapor phase growth of TMD monolayer such as MoS₂ and WSe₂ [1] has stimulated the research in growth and applications [2]. The growth of TMD layers is scalable and these layer materials can be transferred to desired substrates, making them suitable building blocks for constructing multilayer stacks for various applications [3]. Current bottleneck is to design suitable systems for growing high quality and scalable TMD films. Companies should combine expertise and innovation required to develop highly complex technologies and systems. A creative and revolutionary approach should be adopted to deliver state-of-the-art CVDs enables customers to transform possibilities into reality. (Figure 1a)

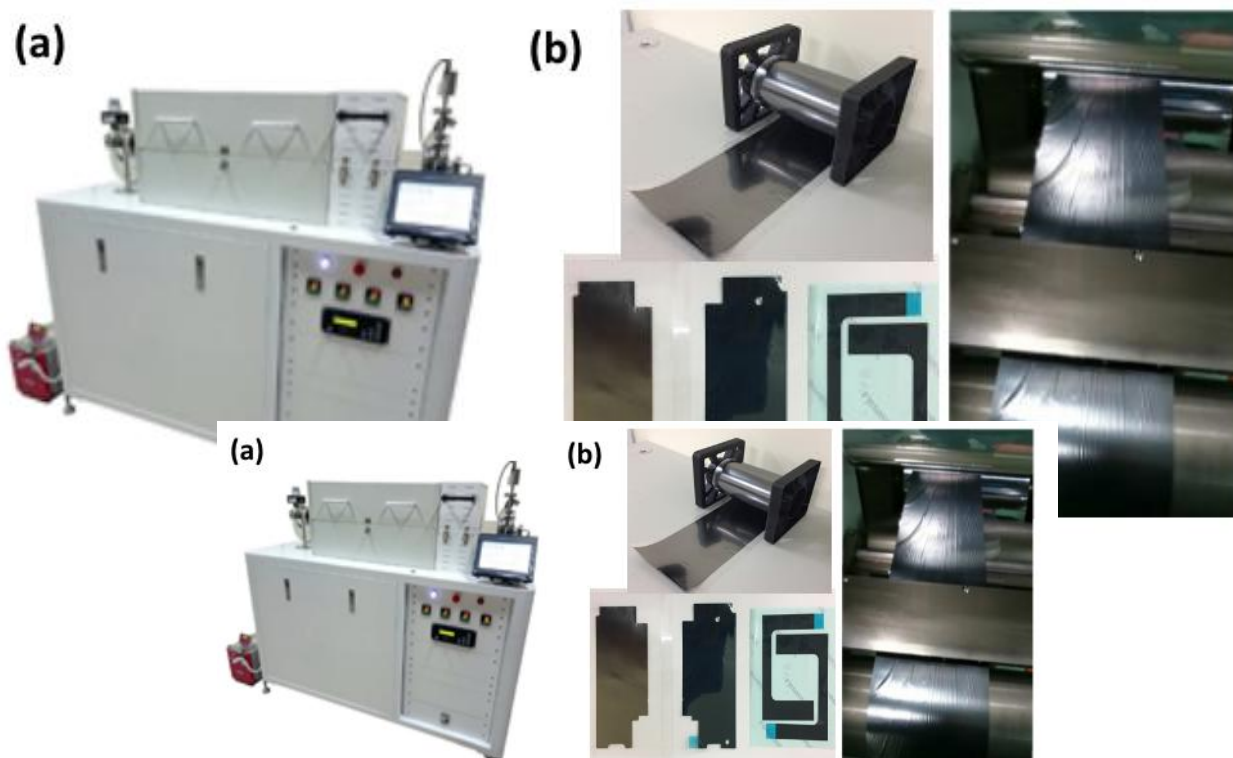


Fig. 1 (a) Commercial CVD systems dedicated for the growth of 2D transition metal dichalcogenides (b) Available products derived from scalable graphene flakes.