

Transfer of CVD-grown graphene and beyond on metals

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Abstract

Transfer is a key step for the applications of graphene and other two-dimensional (2D) materials grown by chemical vapor deposition (CVD) on metals in electronics and optoelectronics. Here, I will first talk about several critical transfer issues that limit the applications of CVD-grown 2D materials, including metal substrate non-destructive transfer, ultraclean and damage-free transfer, improvement on the electrical conductivity and adhesion, and scaling. Then I will demonstrate the use of transferred CVD-grown graphene and monolayer WS₂ in large-area flexible touch panels, OLEDs and transistors.

References

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- [4] T. Ma, H.M. Cheng, W.C. Ren, et al., *Nature Communications* Accepted (2017).
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Figures



Figure 1: A graphene-based 4 inch monolithic flexible OLED

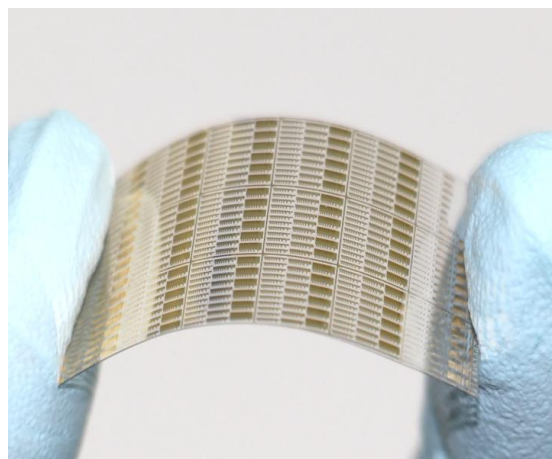


Figure 2: A monolayer WS₂-based flexible transistor array
