Large Single Grain Transistor by Hollow Capillary Method

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Abstract:

Using 6,13-bis(triisopropyl-silylethynyl) pentacene (TIPS-Pentacene), We have made solution processed single crystal thin film transistor by hollow capillary method. The grain size is 1mm wide and more than 10mm long along with the writing direction routinely. Thickness of the highly uniform and continuous film can be varied from 10nm to 200nm by tuning the concentration and speed of substrate. Anisotropic field effect transistor mobility can be observed by varying the orientation.