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## Drying dynamics of blade coated P(NDI2OD-T2) via in situ GIWAXS investigation

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Solution cast, organic field-effect transistors (OFET) have many advantages, such as rapid, large area fabrication, low production cost and flexible substrates making them ideal for specialized applications (ex: flexible displays, radio frequency identification).

Suitable fabrication techniques that can readily scale up are therefore essential when looking at future manufacturing scenarios. Blade coating, the act of shearing a solution across a surface to generate a thin film is one such technique that can be adopted.

Film morphology plays a key role in determining the electronic properties of any organic semiconductor system. Understanding the dynamic development of blade coated film morphology is an integral first step to enhancing the electronic properties via processing conditions.

In situ grazing incidence wide angle xray scattering (GIWAXS) allows the morphology dynamics of P(NDI2OD-T2) to be investigated throughout film deposition and crystallization in two common solvents, toluene and xylene. A complex picture of crystallization emerges that illuminates the transitory states and speed at which the transition takes place.

### Keywords

in situ GIWAXS

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