Molecular Beam Epitaxy

How does molecular beam epitaxy work? - Physics Stack Exchange

Differences in the material properties of molecular beam epitaxy and chemical vapor deposition are small, but important.

Organic semiconductor: Polypyrrole

Organic semiconductors are widely used building blocks are polynucleotide or polypyrrole made up of carbon and hydrogen atoms and - in some cases - heteroatoms such as oxygen, sulfur, and nitrogen. They exist in form of molecular crystals or amorphous films as glass or, in general, they are electrically insulating, but because semiconducting thin films are either grown or vapor deposited from appropriate sources.

Molecular beam epitaxy

Organic semiconductor thin films can be deposited using a variety of methods such as molecular beam epitaxy (MBE), atomic layer deposition, and chemical vapor deposition. In MBE, thin films can be grown with excellent control over their thickness and composition.

Layer-by-layer material synthesis utilizing molecular beam epitaxy (MBE); Manipulation of electronic properties via strain, electrostatic gating and magnetic environment; ...