Self-Assembled Monolayers as Nucleating Surfaces to Screen Rapidly for Polymorphs of Organic Crystals

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**Aim:** To assay many different SAMs as nucleating surfaces to screen for polymorphs of compounds important to the pharmaceutical industry.

**Primary Result:** We have identified a type of surface (methyl-terminated SAMs) that selectively nucleates the less stable, but preferable crystal form, of acetaminophen.

**Significance:**
- **Monoclinic Form of Acetaminophen**
  - Currently marketed form
  - No glide planes, poor processibility
- **Orthorhombic Form of Acetaminophen**
  - Glide planes in crystal (red arrow) lead to better processibility.
  - Not commercially available due to difficulty of growth.

Orthorhombic Form
50% of the wells

Monoclinic Form
100% of the wells