ORGANIC CRYSTALS IN FUTURE SOLAR CELL TECHNOLOGY

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As the Earth continues to warm due to human related emissions from burning fossil fuels, alternative and renewable energy sources are becoming increasingly important. A new generation of solar cell technology relying on organic semiconductors could fill certain applications that are poorly addressed by traditional inorganic solar cells. However, a common issue with organic semiconductors is their poor electrical properties, which is in part due to their application as disordered, amorphous materials. Organic crystals, however, have superior electrical properties. The focus of this talk is to further our understanding of organic crystal growth and their integration into future devices. I will discuss my work that ranges from expanding the number of known organic materials that can crystallize to investigating methods that will allow for crystals to be grown on top of another crystal.

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