

## A Nanoscale Perspective on Organic Electronics

Organic semiconductors are finding their way into consumer electronics such as smart phones and curved televisions. The next generation of organic electronics promises to be low-cost, mechanically-flexible, printable, and have broader functionality, for example, for energy harvesting and health monitoring. In this talk, I will highlight the influence of nanoscale structure on the properties of organic electronic devices. I will introduce conductive atomic force microscopy and show how this approach can provide unique insight into: the percolation of charge in organic solar cells, the tunable electrical properties of graphene oxide, and the role of nanoscale contacts in foldable paper-based pressure sensors.

Jeffrey M. Mativetsky is an Associate Professor of Physics and Materials Science at Binghamton University (State University of New York) where he leads the Organic Electronics and Solar Cell Laboratory. His research focuses on the interplay between nanoscale material structure and electrical function. Prof. Mativetsky received his PhD in Physics from McGill University and is the recipient of multiple fellowships and awards, including a National Science Foundation CAREER Award, a Dreyfus Environmental Chemistry Fellowship, a Marie Curie Fellowship, and a Japanese Society for the Promotion of Science Fellowship.

**Department of Physics  
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**Theoretical and  
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Physics, and Astronomy  
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**Wednesday, November 20th**

**4:00 PM**

**Innovation Hall**

**Room E430**

**Refreshments will be available at**

**3:30 PM.**

**In E217**

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