Undergraduate research in thin-film, organic semiconductor devices

Advisor: Prof. Matthew S. White
Deadline: Wednesday January 27th 2016 2:00 pm
Submit to: denise.fontaine@uvm.edu
Stipend: $750

The UNIVERSITY of VERMONT
DEPARTMENT OF PHYSICS
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Announcing four undergraduate research fellowships for the Spring 2016 semester in the field of thin-film, organic semiconductor devices. Each fellow will be awarded a $750 stipend and will be expected to commit roughly 4 hours per week towards accomplishing their own project and participating in group meetings.

To apply, please submit a project proposal of no more than one page to Denise Fontaine by e-mail before 2:00 pm on Wednesday, January 27th. The applications will be evaluated based on the merit of the proposal. Please only include your name or other identifying information once, at the top of the page.

You are strongly encouraged to discuss potential project ideas or any other questions with Prof. White before submission, to ensure the availability of equipment and the feasibility and impact of the project.

Potential projects could include:

- Thin-film evaporation and optical characterization
- Vacuum furnace sublimation and crystal growth
- Light Intensity Modulated Photocurrent Spectroscopy (IMPS)
- Light Intensity Modulated photo-Voltage Spectroscopy (IMVS)
- Nonlinear impedance spectroscopy (NLIS)
- Equivalent circuit modeling of solar cells
- Photo-thermal deflection spectroscopy
- Carrier Extraction by Linearly Increasing Voltage (CELIV)
- Organic LEDs
- Organic photovoltaics
- Organic transistors
- Conductivity and transparency of thin films