# Organic Materials Group

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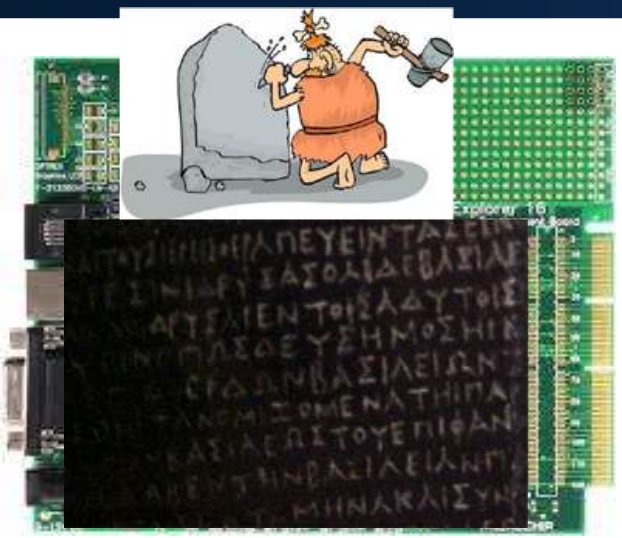
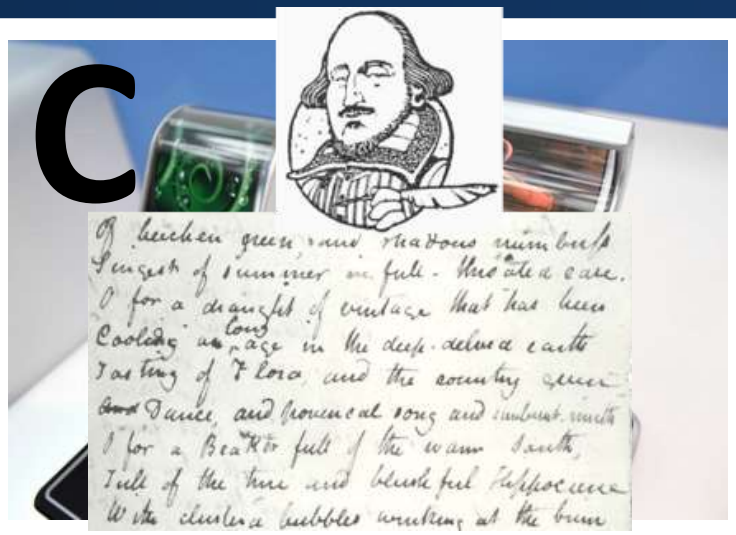
CAER / Chemistry

# What does this group do?

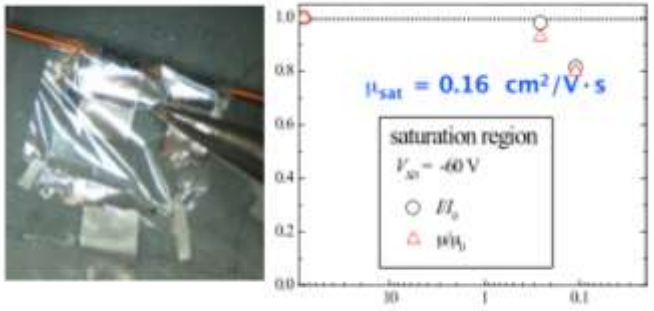




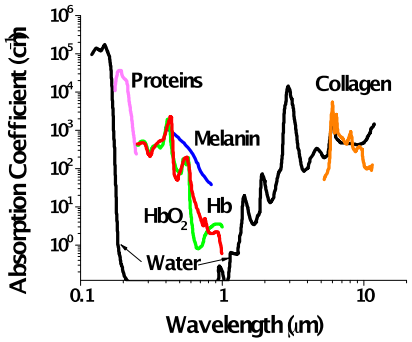

Carbon materials allow electronics to be: Flexible, Thin, Light, Printable, Inexpensive, Efficient, Biocompatible

Solar cell spray-painted on a rock

Solid-state lighting pixel

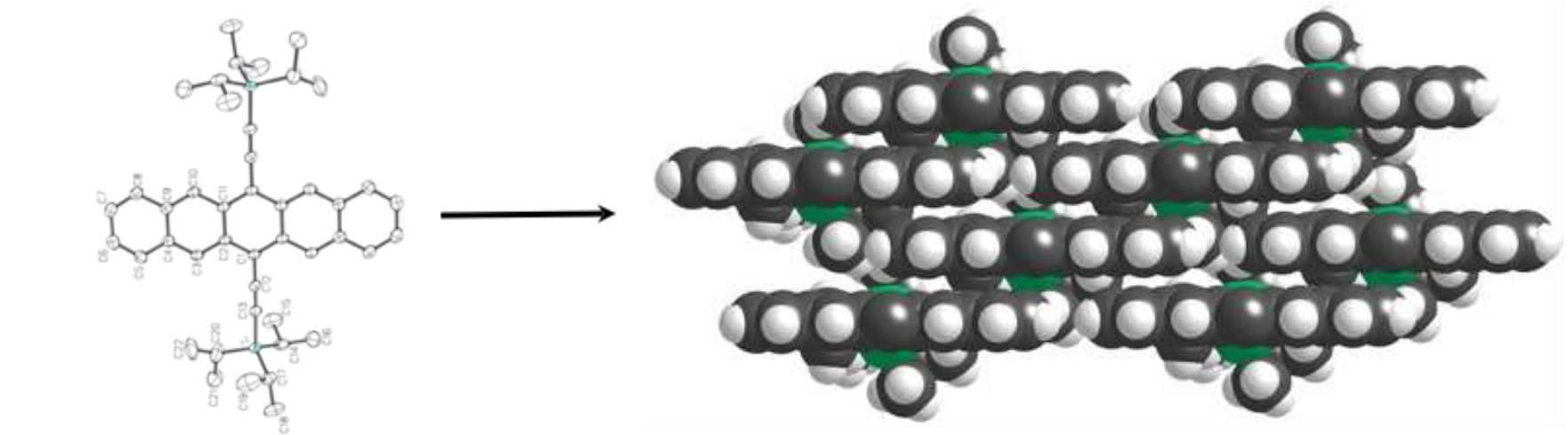


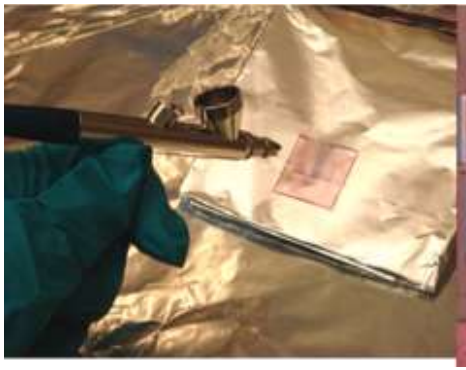

Robust transistors for flexible displays

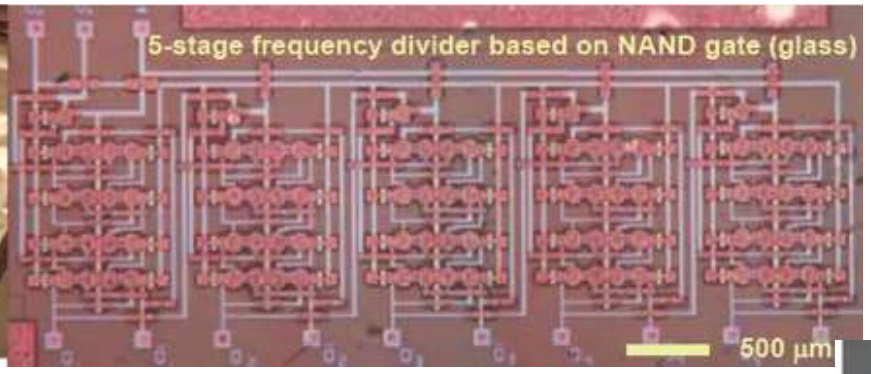


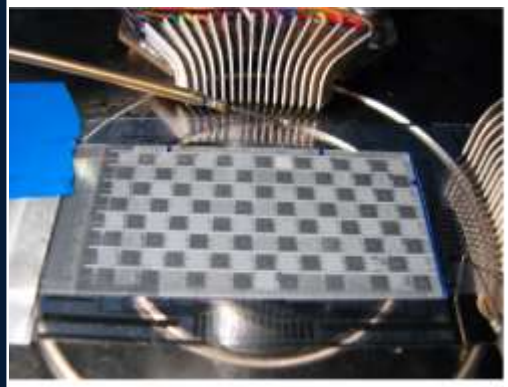

Tumor imaging

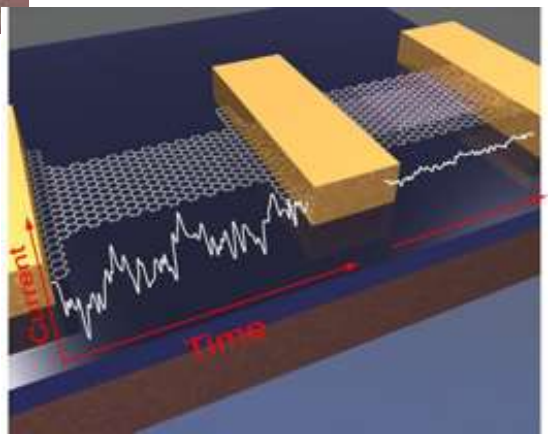
# Ongoing projects: Electronics



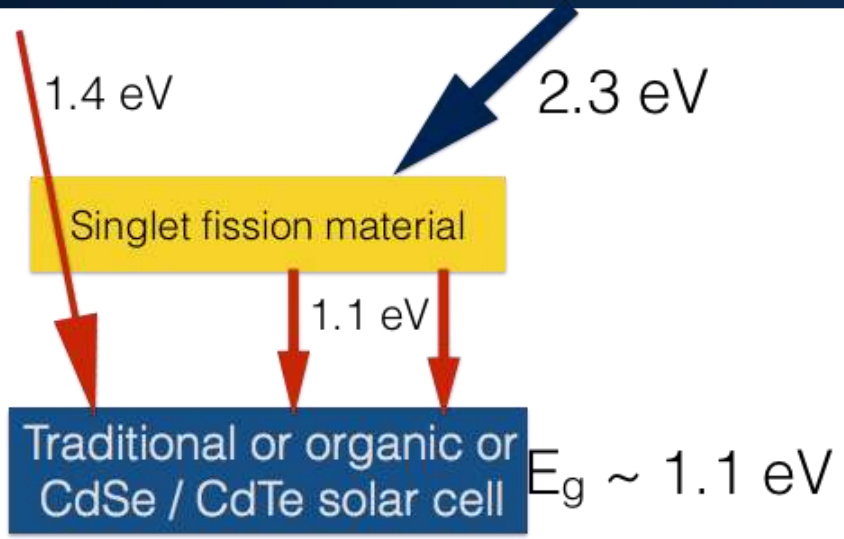


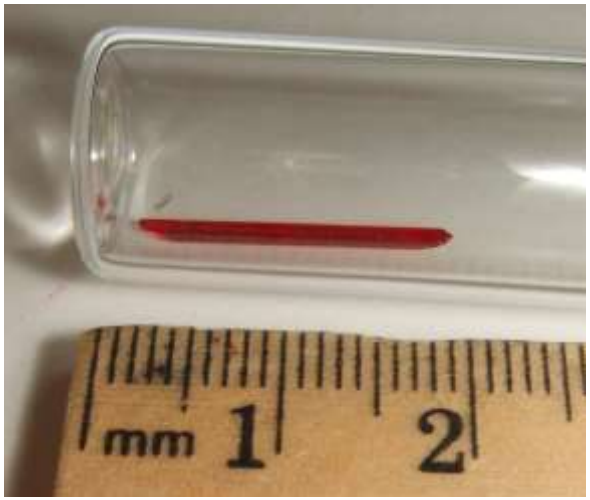


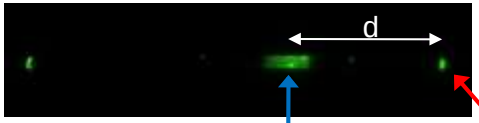





# Ongoing projects: Photonics



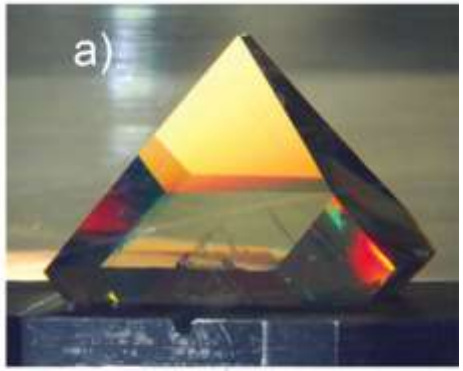



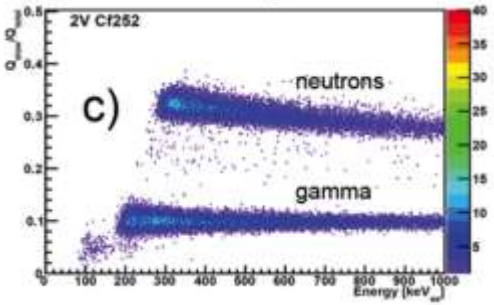



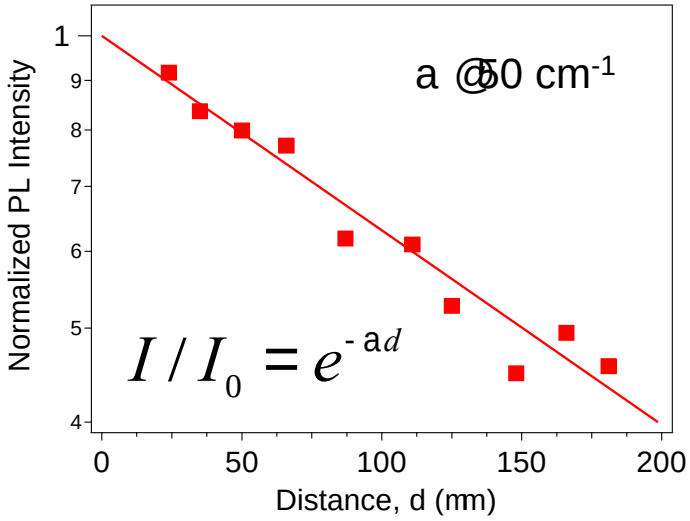

m-PL image

Guided emission

Excitation spot



# What skills and expertise can you acquire?

- Organic material synthesis
- Electronics-grade purification techniques
- Electrochemistry
- Fundamental photophysical characterization
- Structural material characterization – thin-films and crystals

# Who will you work with?

PRINCETON UNIVERSITY

WAKE FOREST UNIVERSITY

King Abdullah University of Science and Technology

UNIVERSITY OF CAMBRIDGE

NIST National Institute of Standards and Technology U.S. Department of Commerce

Imperial College London

SRNL SAVANNAH RIVER NATIONAL LABORATORY

# Additional info

- **Who funds the OMG?**

*National Science Foundation* *U.S. Department of Energy*

*Office of Naval Research* *Private corporations* *Department of Homeland Security*

- **Where does the OMG publish?**

*Nature Materials* *Nature Chemistry* *Chemistry of Materials*

*Advanced Materials* *Nature Communications* *Proceedings of the National Academy of Science*

*Journal of Materials Chemistry* *Journal of the American Chemical Society*

- **Where does the biofuels group present its results?**

*Materials Research Society* *American Chemical Society National Meeting*

*SPIE (Optics & Photonics)* *Functional π-Electron Systems Symposium*

- **Where do students that work in the biofuels group go afterwards?**

*Industry (e.g. 3M, ICN, BASF)* *Government (e.g. National Labs)*

*Graduate or Medical School* *Academia (e.g. Juniata College, U. Kentucky, Ole Miss)*