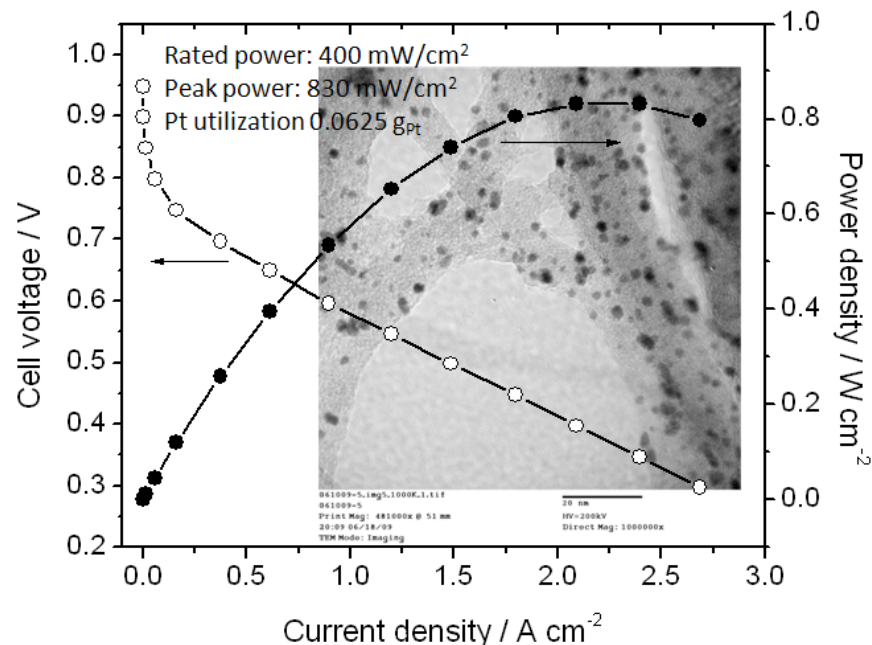
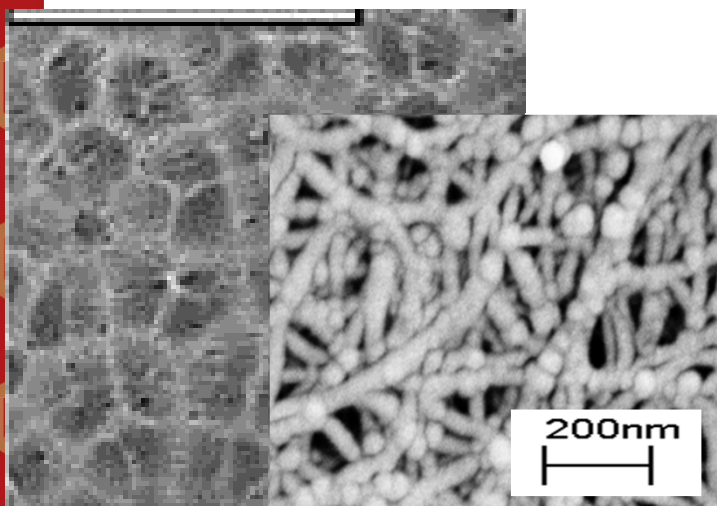


# Nanomaterials for Energy Applications

Nanomaterials and nanostructures are critical for developing novel and highly efficient energy devices

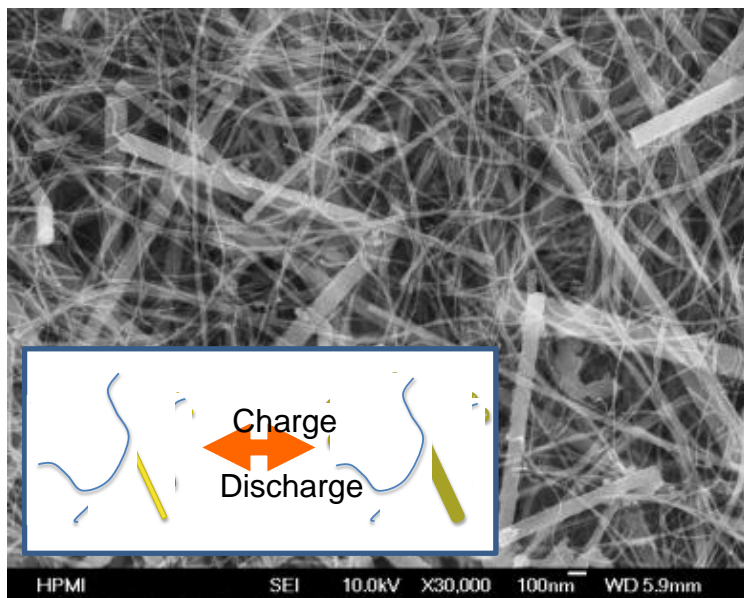
Discovering, designing and scaling-up manufacturing of carbon nanomaterials and nanofoam materials for energy devices and harvesting



Creating new nanostructured electrodes by supercritical fluid deposition to significantly improve efficiency and performance in fuel cells and supercapacitors (Dr. C. Zeng, with Dr. J. Zheng at ECE)

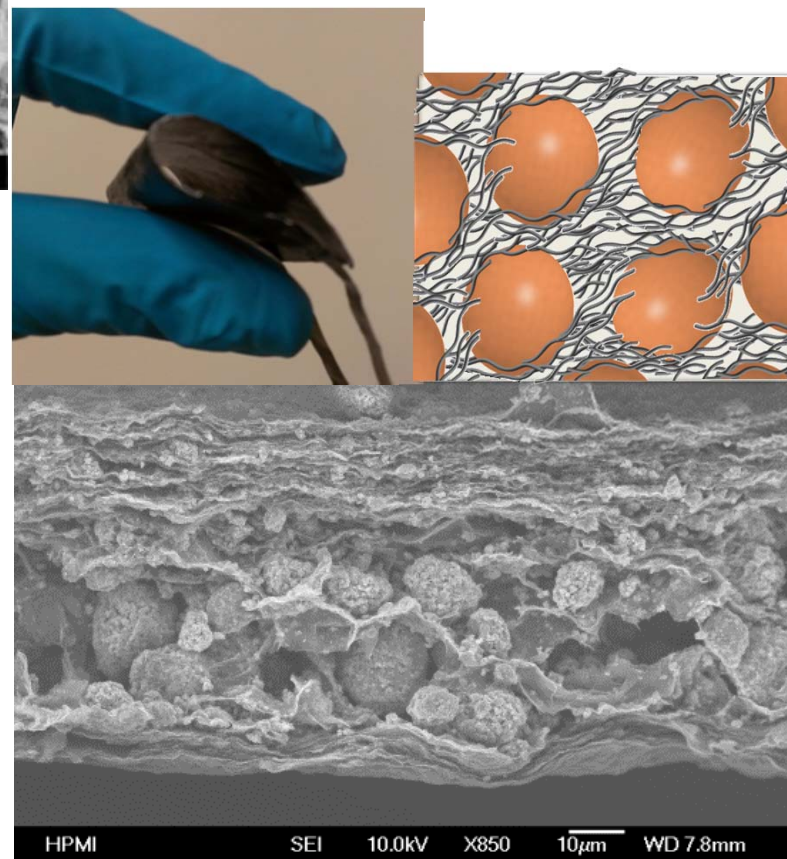
Tailored porous structures of SWNT and SWNT/carbon electrodes for Li battery and supercapacitor applications (Dr. T. Liu, with Dr. S. Kumar at Georgia Tech)

# Nanomaterials for Energy Applications

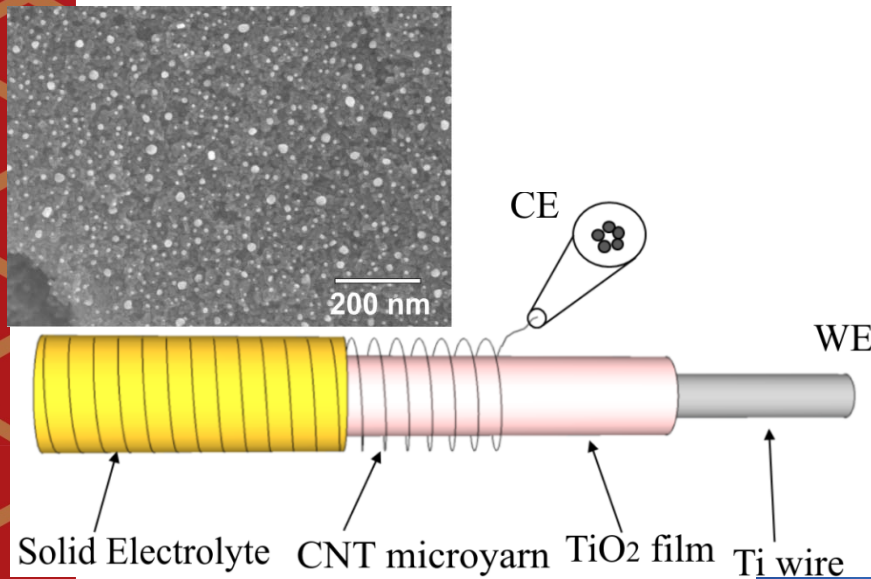


Explore and develop techniques to fabricate hybrid CNT/Si nanowire architectures for Li-ion batteries (Dr. M. Zhang, with Dr. J. Zheng at ECE)

Studying multifunctional properties of CNT networks and hybrid structured electrodes to optimize energy device performance. (Dr. R. Liang, with Dr. J. Zheng and Dr. P. Andrei of ECE and Dr. J. Brooks of Physics)



# Nanomaterials for Energy Applications



Assembling a cost efficient microwire-shaped 3D solar cell with high efficiency, surface adaptability and concealed/remote operation capabilities for advanced in-situ structural health monitoring applications (Dr. O. Okoli)

HPMI houses \$7.5M state-of-the-art resources facilities:

- FESEM/STEM/EDS
- CVD
- Thermal analysis
- FTIR, UV-VIS and micro-Raman spectrometry
- SAXS/WAXS/GISAXS X-Ray scattering
- Multiple-mode AFM

