

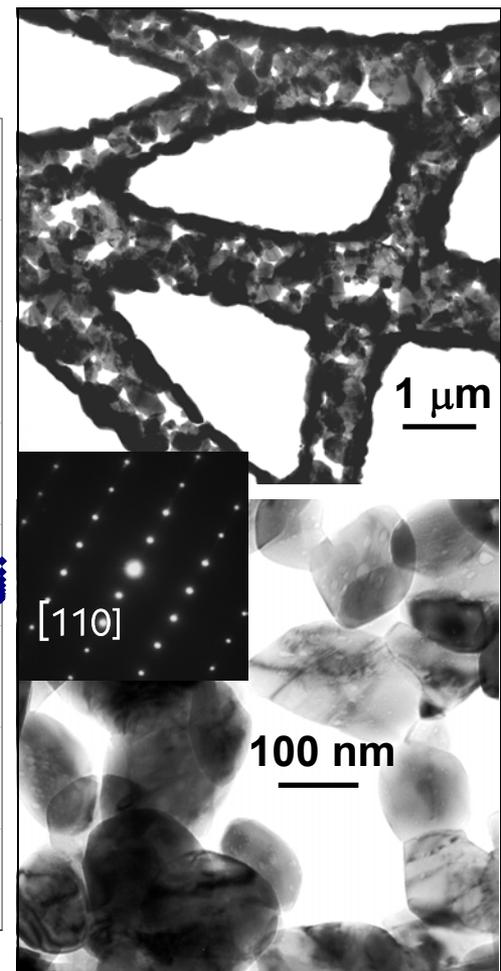
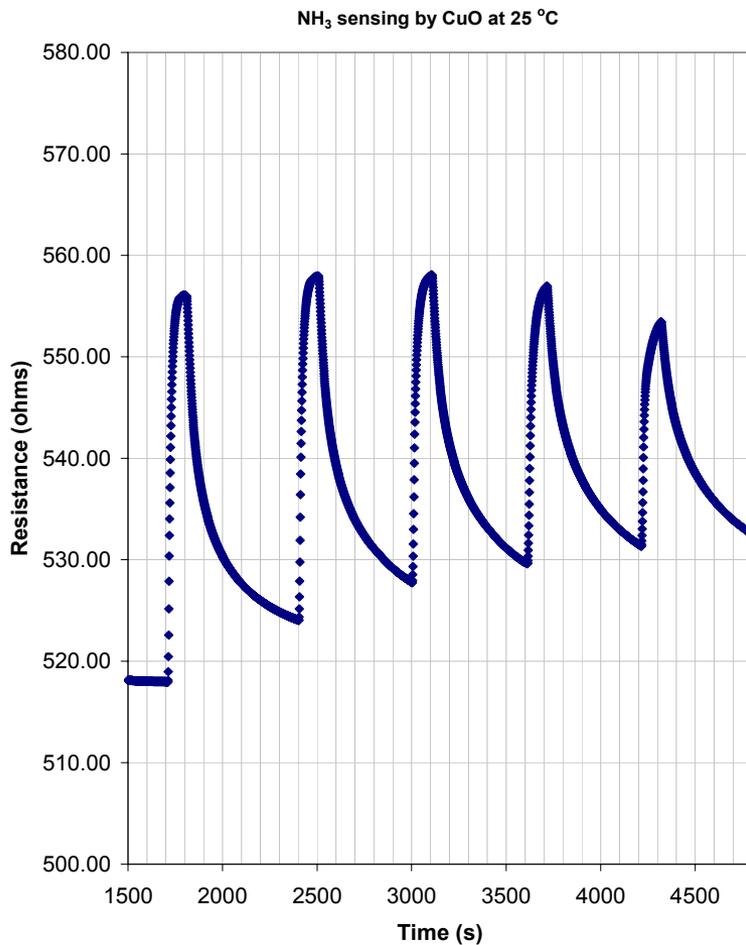
NIRT: Nano-composite Metal Oxides for Electronic Noses

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CuO Nanogrids

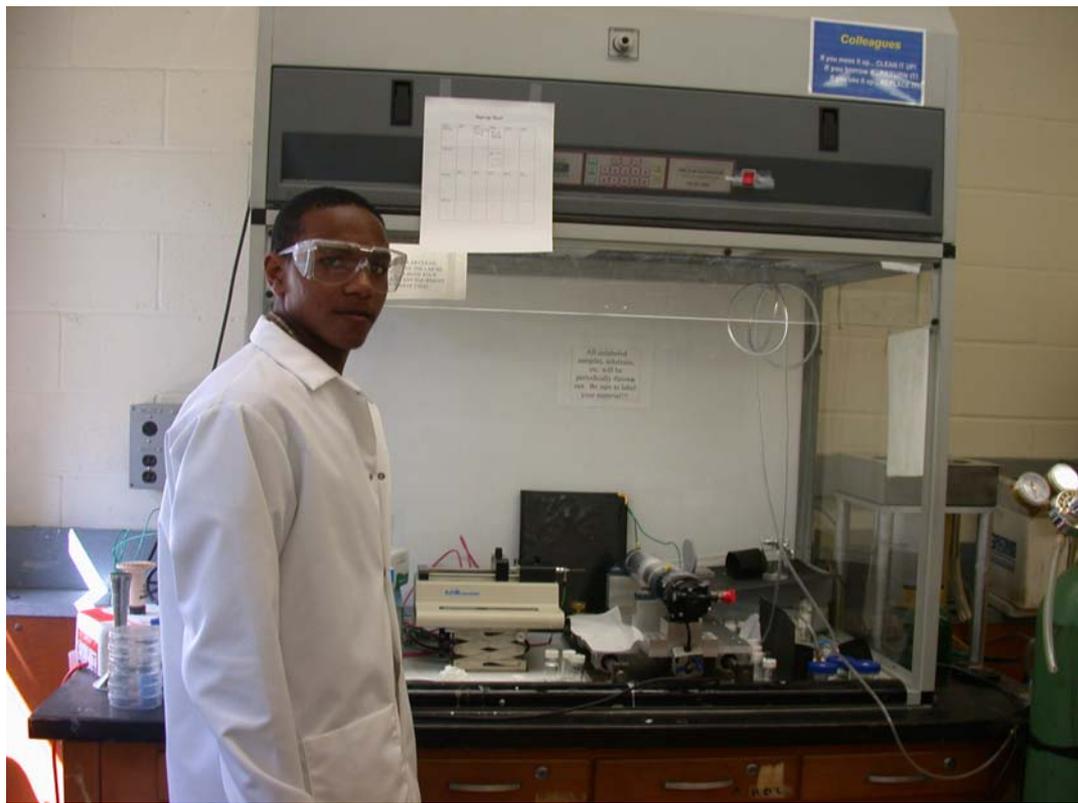
Continuous and self-supported 3D nano structures of cupric oxide (CuO) with bimodal porosity were prepared by means of electrospinning PVP mats on copper grids and then applying a HT oxidation heat treatment to the composite structure. The novel nanostructured grids are consisting of interconnected particle chains and show high affinity to ammonia at RT. Therefore, they may be used as advanced chemosensors and catalysts.

RT ammonia sensing



Outreach Activities

This project has attracted the attention of highly motivated high school students from Long Island wishing to obtain research experience in *nano-science & technology*. The best of these applicants have spent time working in the lab, electrospinning nanowires or using the electronic noses and they have presented their findings in Science & Engineering competitions (such as LISEF).



Undergraduate Student (UGS) involvement in this NIRT's activities has resulted in them giving conference presentations and co-authoring research publications. Katarzyna Sawicka (left) is one of these UGSs. She has given talks at ACERS and ACS meetings and has authored papers presented at the International Meeting on Chemical Sensors and other sensor symposia. Furthermore, she has filed an invention disclosure for her work on electrospun biosensors. Her UG nanomaterials research experience motivated her to continue graduate studies in this field.