

Developing low-cost electrochemical methods for measuring contaminants

Abraham Meles (Physics), Monsuru Ramoni (Industrial Engineering), Thiagarajan Soundappan (Chemistry)

Navajo Technical University (NTU) and the Materials Research Science and Engineering Center (MRSEC) at Harvard have embarked on a partnership to engage NTU students in materials science research that can be used to address health and environment issues relevant to the Navajo Nation. One research area is the development of low-cost electrochemical sensing technology, including paper-based technology developed in the research group of George Whitesides. NTU students are learning a variety of low-cost electrochemical sensing techniques at Harvard that will be incorporated into laboratory and classroom activities in chemistry, physics, engineering, and biology at NTU. In addition, these low-cost techniques are attractive platforms for involving the local community and K-12 institutions in collaborative community-based science around water quality, agriculture, and health.

Top: Postdoctoral researcher Maral Mousavi (center) teaches Navajo Tech students Apryl Begay (right) and Michael Nelwood (left) paper electrochemical device fabrication in the laboratory of George **Whitesides**. *Bottom.* Apryl Begay (center) and Michael Nelwood (right) lead a similar training for fellow NTU students and NTU faculty Abraham Meles and Thiagarajan Soundappan.

