Grants Awarded

From 12/1/06 To 12/31/06

Principal Investigator: Jiahong Zhu, Mechanical Engineering

Project Title: CAREER: Novel Conductive Oxide Coatings on Metallic Interconnect for Immediate-Temperature SOFC Application

Activation Amount: $80,194.00

Agency: National Science Foundation

Planar solid oxide fuel cells (SOFCs) offer the potential to generate electricity in an environmentally-friendly, highly-efficient, and cost-effective manner. Significant materials-related issues must be overcome before planar SOFCs can be economically deployed for commercial-scale power generation. Particularly challenging is the development of a low cost interconnect material. With the current trends in reducing the SOFC operation temperatures to the range of 500-800 degrees centigrade, ferritic steels are promoted as the candidate materials for the intermediate-temperature SOFC interconnect due to their low cost and ease of manufacture. However, under long-term cell operation, the increase of contact resistance due to the formation of surface oxide layer(s) and Cr migration to other cell components from the interconnect pose serious issues for these otherwise promising materials. A double-layer coating approach is proposed to address the issues related to ferritic steel interconnect.

Principal Investigator: Virginia Moore, Business Administration

Project Title: Small Business Development Center - 2007

Activation Amount: $55,223.00

Agency: Tennessee SBDC

Grants Awarded

From 12/1/06 To 12/31/06

Principal Investigator: Kevin Liska, Business Media Center

Project Title: Tennessee Seat Belt Education Campaign

Activation Amount: $3,000.00

Agency: Tennessee Road Builders Association

Tennessee Tech's Business Media Center is developing, designing, and testing marketing materials for the full scale launch of a state-wide child seat belt education campaign conducted by the Tennessee Road Builders Association. Included in this project will be the development of strategic and tactical marketing plans to facilitate the implementation of this work.

Principal Investigator: Jiahong Zhu, Mechanical Engineering

Project Title: Novel Composite Materials for SOFC Cathode-Interconnect Contact

Activation Amount: $85,602.00

Agency: U. S. Department of Energy

Grants Awarded

From 12/1/06 To 12/31/06

Principal Investigator: Margaret Phelps, STEM Center

Supporting Prof: Holly Anthony, Curriculum and Instruction/Mendy Howell, Mathematics/Dewey Thurman, Mathematics/Wayne Leimer, Earth Sciences/Ray Jordon, Biology/Kathryn Rust, Chemistry/ Stephen Robinson, Physics/Jeremy Wendt, Curriculum and Instruction

Project Title: NSF ATE Eastern Corridor Teacher Education Project

Activation Amount: $23,328.00

Agency: Pellissippi State Technical Community College (via NSF)

The purposes of the TBR Teacher Preparation Partnership are to:

1. Improve the mathematics, science, and technology preparation of future teachers through a statewide collaboration and systemic change.
2. Improve articulation and advising in the field of teacher education among all institutions involved in this project by offering and requiring the same mathematics, science, and educational technology courses at each institution.
3. Develop student support systems for education majors.
4. Improve the capacity and training of a diverse teaching pool in Tennessee.
5. Provide opportunities for both in-service and pre-service teachers to gain content credit hours to meet NCLB requirements.

At TTU, the project will involve the faculty who regulary teach BIOL 1310, CHEM 1310, GEOL 1310, PHYS 1310, MATH 1410 and 1420, and FOED 2010. These faculty will participate in professional development with faculty with similar teaching responsibilities at the other partner institutions, be provided matching funds for support travel to professional meetings, have access to funds for instructional materials, and receive a summer stipend for course revisions. A campus coordinator will be responsible for articulating the efforts at TTU with the project lead institution.

Grants Awarded

From 12/1/06 To 12/31/06

Principal Investigator: Lachelle Norris, Sociology and Political Science

Supporting Prof: Gretta Stanger, Women's Center

Project Title: Linking Lives: A Women's Mentoring Initiative for Nontraditional Students

Activation Amount: $4,760.00

Agency: American Association of University Women Educational Foundation

"Project Linking Lives" is a collaborative effort of advisors and female nontraditional students to initiate, create, implement, and operate a nontraditional student mentoring program at Tennessee Tech University. Primarily, the project is designed to assist women in the Upper Cumberland region of Tennessee to experience a more fulfilling and successful college career as nontraditional students at TTU. The project is being made possible through a grant from the American Association of University Women (AAUW) Leadership and Training Institute and was selected as this year's Campus Action Project, Planning for an Economically Secure Future, which continues AAUW's focus on higher education as the gateway to women's economic security. The proposal for this project was one of only 10 selected from a nationwide pool of applicants. "Project Linking Lives" will involve the creation of a Nontraditional Student Mentoring Center which will serve as a resource center for providing guidance, support, information, workshops and speakers, etc. for nontraditional students. The Center will also assist in planning a Nontraditional Student Transitions Conference. Finally, a Nontraditional Student's Survival Manual will be produced containing all the information accumulated during this project. Dr. Lachelle Norris (Department of Sociology and Political Science) will act as Principal Investigator and Dr. Gretta Stanger (Chair, Department of Sociology and Political Science and Director of the Women's Center) will serve as Supporting Professional. They are joined by a team of students and AAUW representatives who will be responsible for the completion of the project. "Project Linking Lives" will run from November 15, 2006 until May 15, 2007.

Principal Investigator: Phillip Bettoli, Biology

Project Title: Mississippi River Sturgeon Telemetry Project

Activation Amount: $25,000.00

Agency: Tennessee Wildlife Resources Agency

Grants Awarded

From 12/1/06 To 12/31/06

Principal Investigator: Glenn Binkley, Facilities and Business Services/Margaret Phelps, STEM Center

Project Title: TTU STEM Center

Activation Amount: $229,923.00

Agency: NASA

Principal Investigator: Glenn Binkley, Facilities and Business Services/Margaret Phelps, STEM Center

Project Title: Construction of STEM Center

Activation Amount: $300,000.00

Agency: U. S. Department of Agriculture

Principal Investigator: Frank Hadlock, Computer Science

Supporting Prof: Doug Talbert, Computer Science

Project Title: Smart Card Health-Care Demonstration

Activation Amount: $500,000.00

Agency: State of Tennessee