

## Prof. Fuierer – Back to the US after one year as a guest Professor in Bayreuth

Prof. Paul A. Fuierer from New Mexico Institute of Mining and Technology in Socorro, New Mexico spent one year as a guest professor at the Department of Functional Materials. In the framework of a joint DFG/NSF program “Materials World Network”, he worked on bismuth vanadate based solid ionic conductors for electrochemical devices. One of the goals of the project is to manufacture anisotropic ceramics with a higher ionic conductivity. While at the University of Bayreuth, Fuierer developed protocols for characterizing the ceramics by impedance spectroscopy between 200 °C and 750 °C.

In addition, he received a Mercator professorship award from DFG to study phenomena related to the Aerosol Deposition Method (ADM), also called Room Temperature Impact Consolidation (RTIC). This is a novel method to obtain dense ceramic thin and thick films by spraying dry ceramic powders at sonic or supersonic speeds onto a substrate. Since no sintering is required, this fascinating process offers applications which are inconceivable with conventionally prepared materials.

Both of these projects continue, as Prof. Fuierer and the Department of Functional Materials will stay connected. Next year, mutual exchange of students and project engineers as well as a return visit to Bayreuth by Fuierer are envisaged.

In addition to scientific merit, living in Bayreuth this past year allowed Prof. Fuierer and his family to study and experience German and Franconian culture and heritage.

