

Final Report

American Chemical Society Regional Meeting Presentation

Principal Investigator: Anwar A. Bhuiyan

Department of Physical Sciences

Arkansas Tech University

Russellville, AR 72801

B. Restatement of Problem: The purpose of this proposal was to get financial support to attend American Chemical Society (ACS) 66th Southwest and 62nd Southeastern Regional meeting in New Orleans from November 30 to December 4, 2010. We presented our exciting research results in this ACS meeting.

C. Brief Review of Research Presented: This presentation deals with the synthesis and spectroscopic investigation of ruthenium polypyridine complexes which may be useful in the development of solar energy conversion schemes. Ruthenium monomer complex was prepared and then we utilized the monomer complex to prepare ruthenium dimer complexes by utilizing the Ni-catalyzed coupling reaction. The complexes were purified by column chromatography. The identity and the integrity of the complexes were confirmed by elemental analysis as well as mass spectroscopy. UV/Vis absorption, emission spectroscopic method, and cyclic voltammetric method were used to investigate the properties of these complexes.

D. Outcomes and Experiences: This meeting is considered to be one of the most respected and prestigious scientific meetings. Several thousands of chemical scientists such as chemists, chemical engineers, academicians, postdoctoral as well as graduate and undergraduate students attended this meeting. This meeting provided me the opportunity for scientific networking, sharing exciting research results and discussing various issues regarding research. This meeting was very helpful to get new research ideas and directions. Several hundred presentations were made during this regional meeting which covered every single area of chemical sciences. There were several technical sessions for every area of chemistry that highlight important research advances. Our presentation attracted a number of scientists from the same discipline and from research discussion; we got new ideas and directions. This presentation fulfilled the dissemination requirements for several of our funded research grants.

E. Conclusion: American chemical society maintains the data base of all its meetings and lists all the abstracts there. The results of this proposed presentation was included in a research manuscript and the manuscript was accepted for publication in Journal of the Arkansas Academy of Science (Volume 65). Some of the results from this research were included in my Instrumental Analysis class at Arkansas Tech University. Attending this meeting helped me in professional development.