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Title: MRI: Acquisition of a Single Crystal X-ray Diffractometer

Funding agency: National Science Foundation

Funds are provided to acquire a state-of-the-art single crystal X-ray diffractometer to support research and teaching efforts. In general, an X-ray diffractometer allows accurate and precise measurements of the full three-dimensional structure of a molecule, including bond distances and angles. The instrument acquisition is essential for the characterization of synthetic inorganic and organic materials for applications ranging from the development of new catalysts to materials for optoelectronic devices. The diffractometer is also used to characterize products relevant to molecular catalysis for sustainable energy conversion and compounds for chromophore-semiconductor interfaces. In addition, the diffractometer has broad impact on teaching and training, outreach activities, and graduate and undergraduate research at Rutgers University Newark and regional partners such as the New Jersey Institute of Technology.