

Abstract Submitted  
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**Mössbauer Spectroscopy on Compounds of Biomedical Interests**

F. OLIVER, Morgan State University, N. EWING, E. HOFFMAN, A. KINYUA, F. OLADEINDE, A. MURDOCK, Morgan State University, MORGAN STATE UNIVERSITY COLLABORATION, MORGAN STATE UNIVERSITY TEAM, MORGAN STATE UNIVERSITY TEAM, MORGAN STATE UNIVERSITY TEAM — Mössbauer spectroscopy (nuclear gamma resonance spectroscopy)<sup>1</sup> has been used in our laboratory for many biomedical applications. This presentation will demonstrate uses of Mössbauer spectroscopy to obtain qualitative and quantitative information about the electronic and magnetic properties of various systems. Information is obtained related to the electronic spin, electric quadrupole interaction, and magnetic hyperfine interactions. This technique has a very broad spectrum of applications, most of them in solid state physics and chemistry. Experiments may be done using transmission or backscattering geometry. For the past fifteen years we have successfully applied this technique to investigate materials of biomedical interest. Materials investigated include porphyrins containing europium<sup>2</sup>, plants, over the counter medicines, hemoglobin, and ion implanted implant materials. Results of these experiments and other possible applications will be reported. 1. Leopold May, An Introduction to Mössbauer Spectroscopy, Plenum Press Z(1971). 2. Oliver, et al., Inorganica Chimica Acta, Vol. 186, 119 (1991). \* Partially supported by NIH, \*\* Partially supported by NSF-SEM program.

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