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Investigation of Eu doped TiO_2 thin films[1] EDWARD KHACHATRYAN, ERIK ENRIQUEZ, FRANCISCO PEDRAZA, CHONGLIN CHEN, DHIRAJ SARDAR, University of Texas at San Antonio — We present second harmonic generation from Eu doped Titanium oxide ($Ti\ O_2$) thin films deposited on different substrates (glass, Si, $LaAlO_3$, MgO)by sputtering in different conditions. Atomic Force Microscope (AFM) was used to measure the grain size and the boundaries of the samples. Transmission Electron Microscope (TEM) was applied to study the morphology, crystal structure and for interface imaging. Spectroscopic characterization and comparison between different deposition conditions and substrates also will be presented.

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Edward Khachatryan
University of Texas at San Antonio

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