

GPAC Profile – Natalie Doss

My research interests are mainly focused on the characterization of two-photon absorbers and the study of their ability to photo-initiate reactions for three-dimensional micro- and nanofabrication. As part of this research I am studying molecules that can activate a desired chemical reaction in photosensitive materials that will provide us with useful optical properties within the material. Currently, I am investigating photoacid generators as a source of photo-initiated polymerization in epoxy resins. The overall goal of this research is to identify efficient two-photon absorbers that can be used to initiate reactions in photosensitive materials that will yield the desired optical properties, which in turn will provide us with the materials needed to produce three-dimensional photonic microstructures, such as photonic crystals, waveguides, or tapered couplers.