Poster Presentation
Preparation and Study of Sm-doped Barium-Bismuth Borate Glasses
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A series of barium-bismuth borate glass samples doped with Sm were prepared with increasing bismuth oxide content. For each glass sample, starting materials were carefully measured out using an analytical balance and was grounded to a fine powder where it was thoroughly mixed and placed in a porcelain crucible for melting at around 1000 °C. Once the samples were melted, they were mixed via agitation three times and then quenched by pouring onto a brass plate. A brass washer was used to retain a circular shape and keep a uniform thickness. After quenching, each sample was placed in an alumina boat for annealing at a temperature of 350 °C for a period of 3 hours using a tube furnace. Annealed glass samples are polished for optical absorption and fluorescence studies. Preliminary results show that the intensity of Sm fluorescence spectra vary with the base glass composition.