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PHOTO-LUMINESCENCE OF EINSTEINIUM IN SILICATE MATRIX.*

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We have conducted a spectroscopic investigation of the rare 5f-element, Es (element 99) in a silicate matrix, probing its photo-luminescence spectra as a function of laser power. The sample exhibits two prominent broad emission bands centering at 15350, 13560, and a third band at 13020 cm⁻¹ that emerges at a threshold power of ~ 400 mW. A special aspect of the spectroscopic study involved the potential interaction of excited einsteinium with those of the host matrix. Details involving the origin of these emissions as well as factors influencing them will be presented. *Research sponsored by the Chemical Sciences Div., BES, U.S. DOE, under contract DE-AC05960R22464 with Lockheed Martin Energy Research Corp.