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**Tunable Processing of Chalcogen-Hyperdoped Silicon**

KAZ MOFFETT, RANDY KNIZE, RENI AYACHITULA, KIMBERLY DE LA HARPE, NOAH BLACH, DANIEL WEISZ, United States Air Force Academy — We will present studies on samples of chalcogen-hyperdoped silicon produced using a tunable process, allowing for the systematic variation of sulfur content within silicon. Hyperdoping silicon with sulfur leads to increased absorption in the infrared region, making it of interest for application in solar technology and infrared detection. Future work involves adapting this tunable method to be scalable and cost effective.