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Effect of Illumination Temperature on Thermally Stimulated Current Spectrum of $TlInS_2$

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Abstract: The effect of pre-illumination on both thermally stimulated current and photocurrent spectra of $TlInS_2$ crystal is investigated. The increase in the photosensitivity of the crystal by several orders of magnitude together with the appearance of a new peak in the thermally stimulated current spectrum are observed as a result of the pre-illumination process. The filling of the traps, especially the sensitizing centers, during the pre-illumination is found to be the most favourable physical mechanism to explain the results.

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