Optically Stimulated Luminescence in beta irradiated Ge-doped optical fibre

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Abstract:
Ge-doped optical fiber has been reported to luminate following exposures to radiation sources. We report in this paper Optically Stimulated Luminescence (OSL) of Ge-doped SiO$_2$ fibres following prolonged exposure to beta particles, giving a dose of ~20 Gy. A shift in the wavelength of transmitted light has been observed, due to OSL from 827 ± 34 nm to 917 ± 15 nm.

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