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Title: Special pure germanium-rich Ga-Ge-As-Se glasses for active mid-IR fiber optics

Authors: V.S. Shiryaev, E.V. Karaksina, M.F. Churbanov, T.V. Kotereva, B.S. Stepanov, L.A. Ketkova, I.I. Evdokimov, V.V. Koltashev, V.G. Plotnichenko, A.I. Filatov, I.N. Antonov



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Special pure germanium-rich Ga-Ge-As-Se glasses for active mid-IR fiber optics

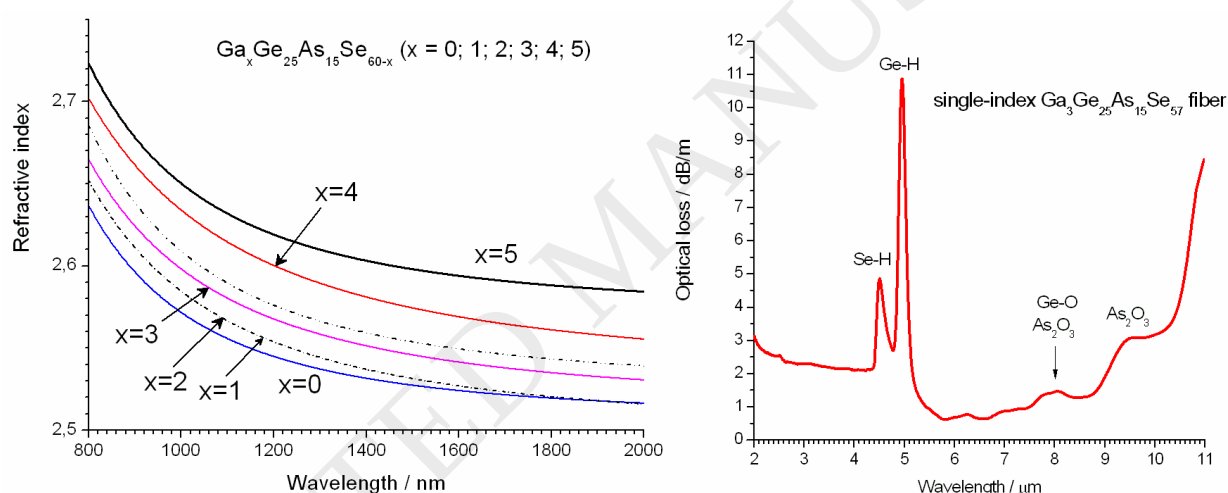
V.S. Shiryaev¹, E.V. Karaksina¹, M.F. Churbanov¹, T.V. Kotereva¹, B.S. Stepanov¹, L.A. Ketkova¹,
I.I. Evdokimov¹, V.V. Koltashev², V.G. Plotnichenko², A.I. Filatov¹, I.N. Antonov³

¹G.G. Devyatykh Institute of Chemistry of High-Purity Substances of the Russian Academy of Sciences, 49 Tropinin Str., 603951, Nizhny Novgorod, Russia

²Fiber Optics Research Center of the Russian Academy of Sciences, 38 Vavilov Str., 119333, Moscow, Russia

³ Research Institute for Physics and Technology, Lobachevsky State University of Nizhny Novgorod, 23 Gagarin Avenue, 603950, Nizhny Novgorod, Russia

Graphical Abstract



Highlights

- Special pure $\text{Ga}_x\text{Ge}_{25}\text{As}_{15}\text{Se}_{60-x}$ ($x = 0; 1; 2; 3; 4; 5$) glasses were prepared and investigated.
- The glasses have high glass transition temperature ($>320^\circ\text{C}$) and low tendency to crystallization.
- The microstructure, the transmission region and the linear refractive index of glasses were studied.
- Dispersion optical parameters of glasses were calculated using the Wemple-DiDomenico model.
- For the first time, a single-index $\text{Ga}_3\text{Ge}_{25}\text{As}_{15}\text{Se}_{57}$ glass fiber was fabricated and investigated.

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