

AGEING EFFECTS IN $\text{As}_{10}\text{Se}_{90}$ CHALCOGENIDE
GLASSES INDUCED BY γ -IRRADIATION

*R. Golovchak, O. Shpotyuk, M. Shpotyuk¹, Cz. Gorecki²,
A. Kozdras²*

Lviv Scientific Research Institute of Materials
of SRC "Carat"

(202, Stryiska Str., L'viv 79031, Ukraine),

¹Institute of Telecommunications,

Radioelectronics and Electronic Technique

of L'viv Polytechnic National University

(12, S. Bandera Str., L'viv 79013, Ukraine),

²Institute of Physics, Mathematics and Chemistry

of Opole Technical University

(75, Ozimska Str., Opole PL-45370, Poland)

S u m m a r y

The peculiarities of γ -induced (Co^{60} source, 1.85 MGy absorbed dose) ageing phenomena in $\text{As}_{10}\text{Se}_{90}$ chalcogenide glasses are investigated for the first time. The analogy between the observed radiation-induced ageing and the thermally induced one in vitreous selenium is emphasized. Like to thermal treatment, γ -irradiation leads to an increase in the glass transition temperature and the relaxation rate towards a thermodynamic equilibrium of supercooled liquid, the value of this increase being greater in the case of radiation influence.