

STRUCTURE AND PHYSICAL PROPERTIES
OF Pb–Sn MELTS

*V. Sklyarchuk*¹, *A. Yakymovych*¹, *I. Shtablavyy*¹,
*I. Shevernoha*¹, *M. Kozlovskii*², *R. Khairulin*³,
*S. Stankus*³

¹I. Franko L'viv National University,
Chair of Metal Physics
(8, *Kyryla i Mefodiya Str.*, *L'viv 79005, Ukraine*;
e-mail: vasylysklyarchuk@gmail.com),

²Institute of Condensed Matter Physics,
Nat. Acad. of Sci. of Ukraine
(1, *Sventsits'kogo Str.*, *L'viv 79011, Ukraine*;
e-mail: mpk@icmp.lviv.ua),

³S.S. Kutateladze Institute of Heat Physics of the RAS
(1, *Academician Lavrent'ev Prosp.*, *Novosibirsk 630090,*
Russia; e-mail: stankus@itp.nsc.ru)

S u m m a r y

We study the structure, mutual diffusion, electrical resistance, thermopower, and viscosity of Pb–Sn melts in a wide temperature interval. On the basis of revealed differences between the curves of heating and cooling for the temperature dependences of electrophysical and structure-sensitive properties, as well as the hysteresis observed in the heating-cooling cycles, we assume the existence of a metastable microheterogeneous structure in Pb–Sn melts in a certain temperature interval.