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Ta, Nb and Zr melts diffusion

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Abstract

The dependence of self-diffusion constants of Zn, Fe, Cu, Ag, Pd, U, and Au liquid metals and their density, and the dependence of iron diffusion constants and the density of these liquid metals are defined on the basis of the experimental data. It's determined the results obtained by MD calculations, the self-diffusion constants of Zr, Nb, Ta melts and iron diffusion in these melts obtained by the model of soft spheres are in accordance with mentioned above interdependence.