Photoconductivity of the single crystals $Pb_4Ga_4GeS_{12}$ and $Pb_4Ga_4GeSe_{12}$

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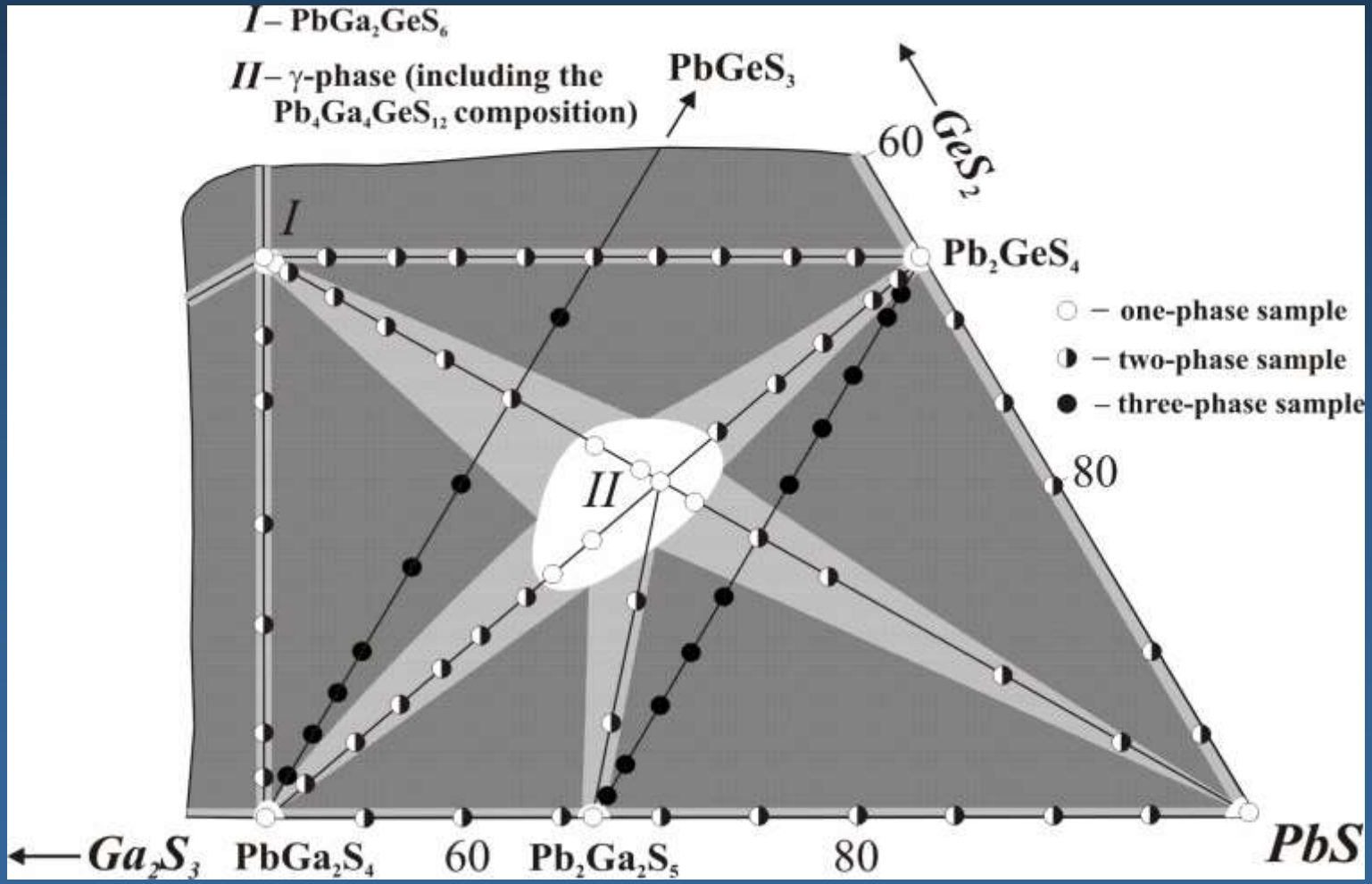
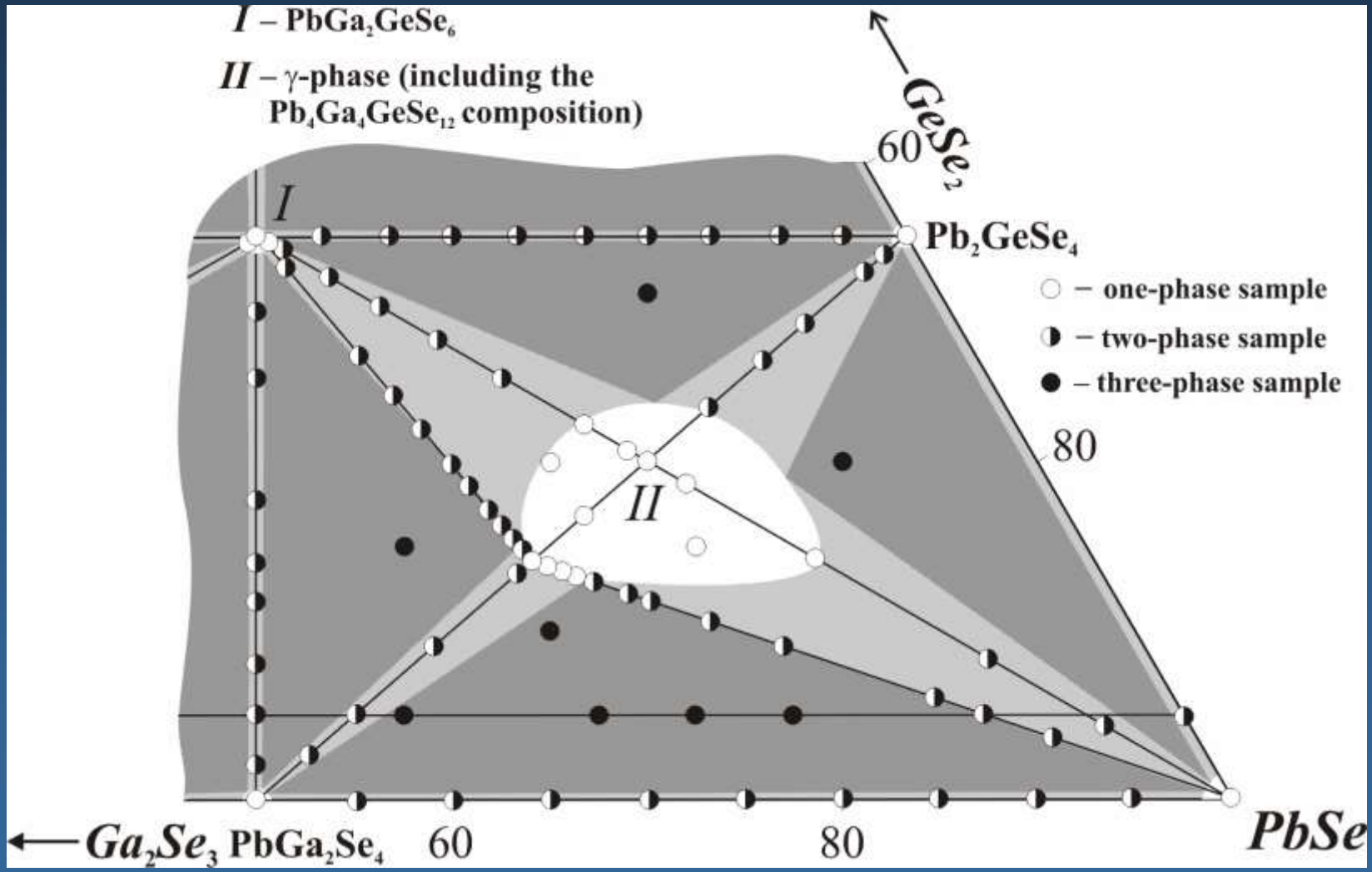
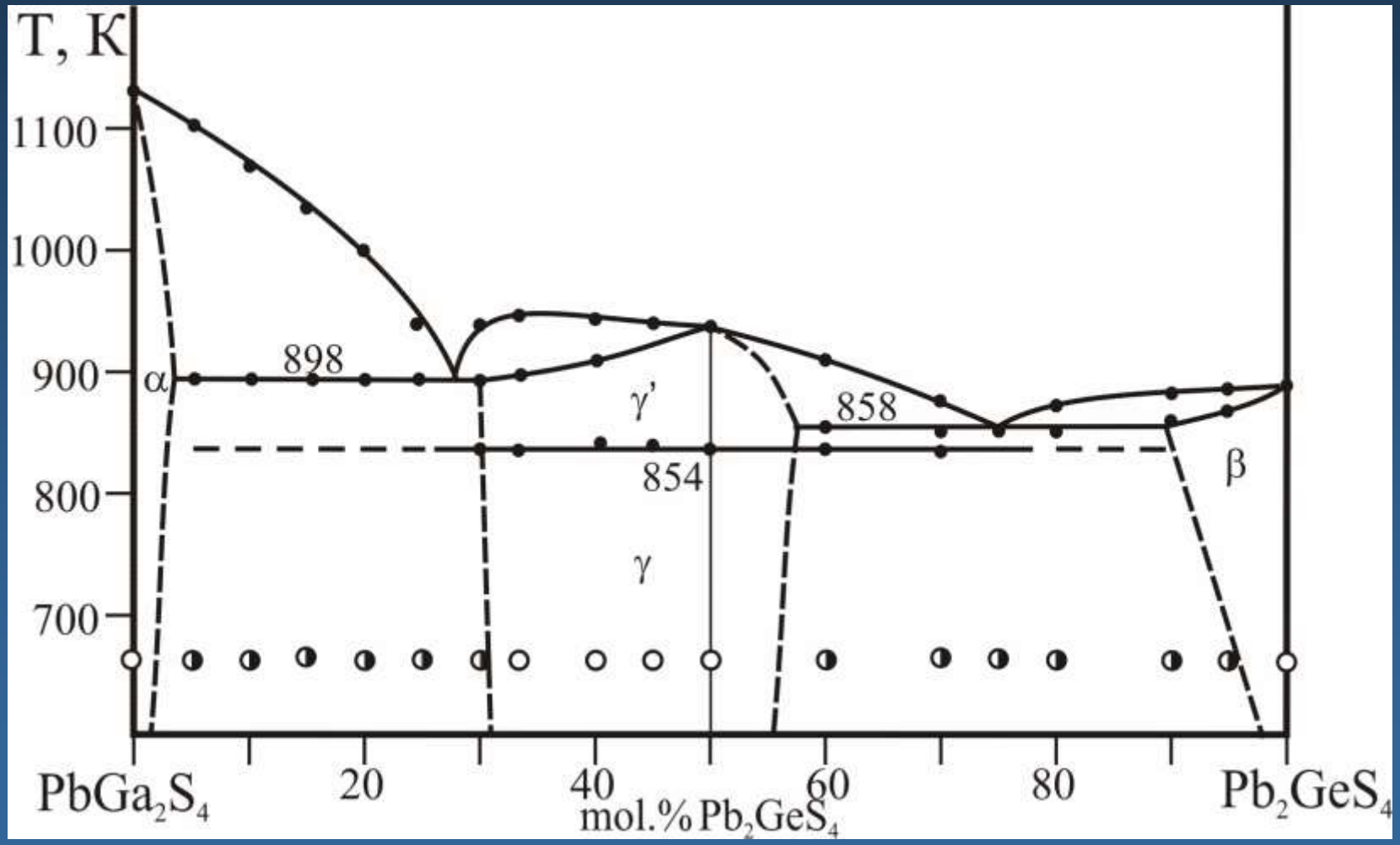
Existence of $Pb_4Ga_4GeS_{12}$ in the quasi-ternary system (670 K)



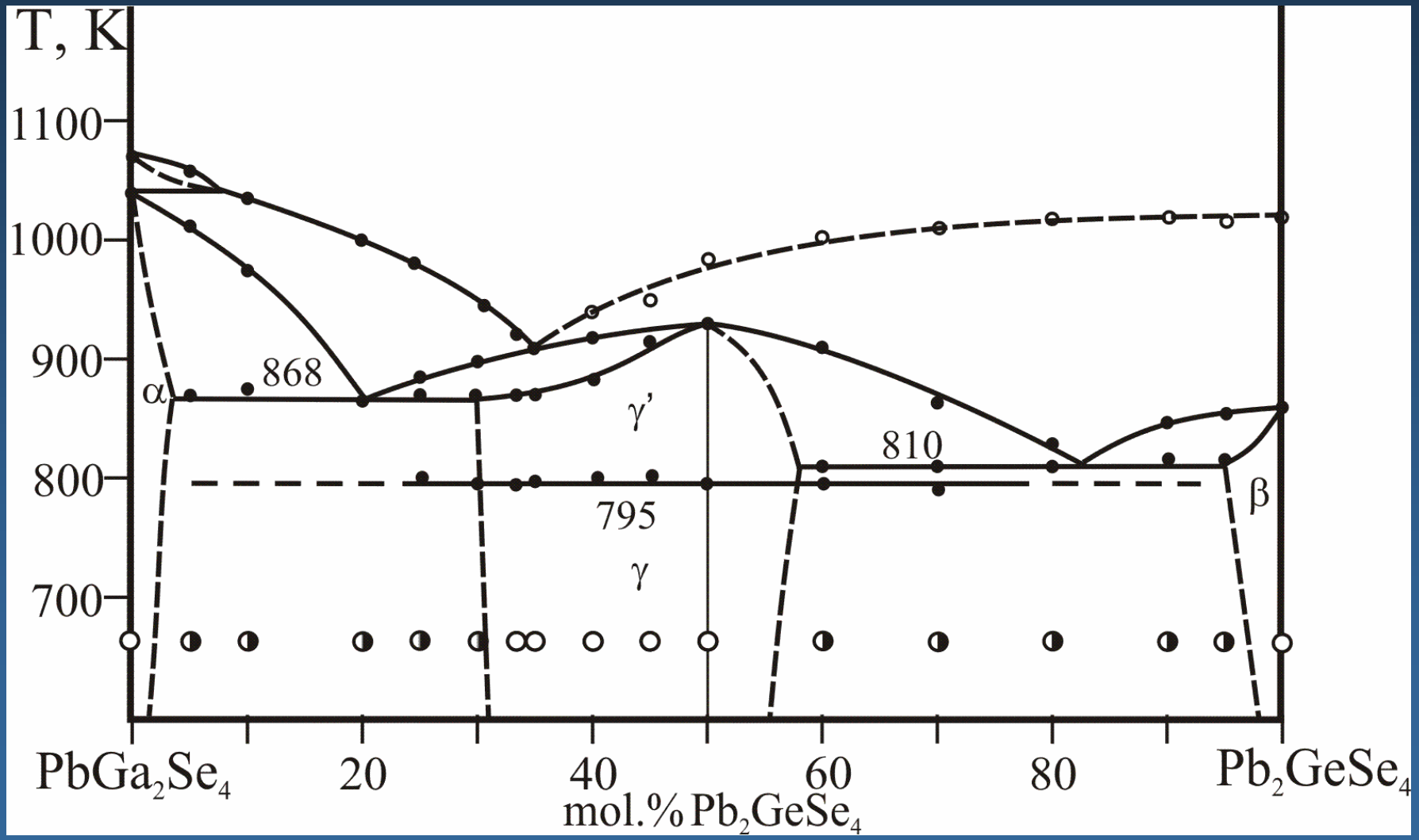
Existence of $Pb_4Ga_4GeSe_{12}$ in the quasi-ternary system (670 K)



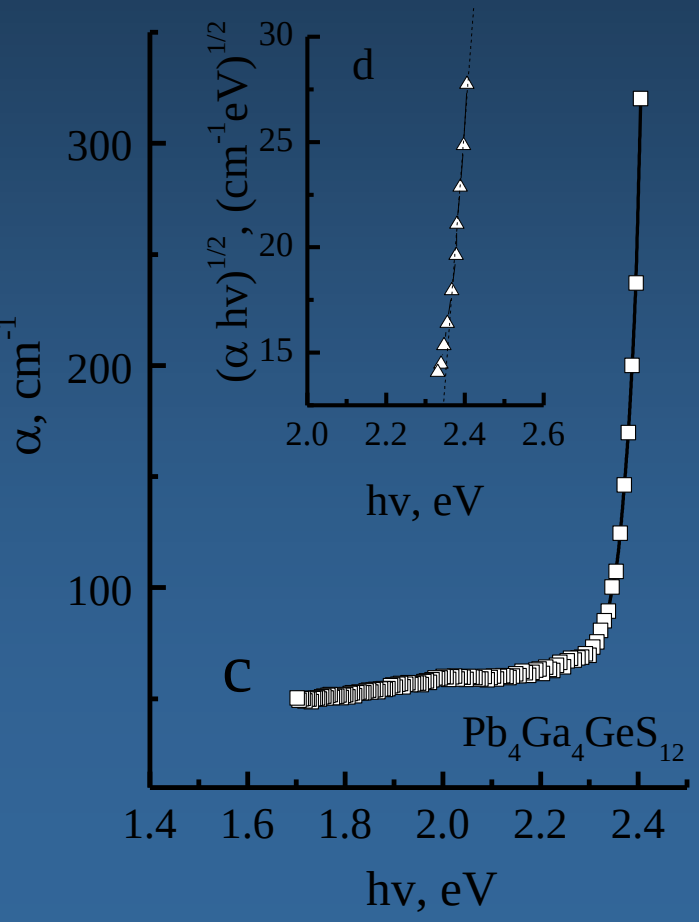
Phase diagram of the $PbGa_2S_4$–Pb_2GeS_4 system



Phase diagram of the $PbGa_2Se_4$–Pb_2GeSe_4 system

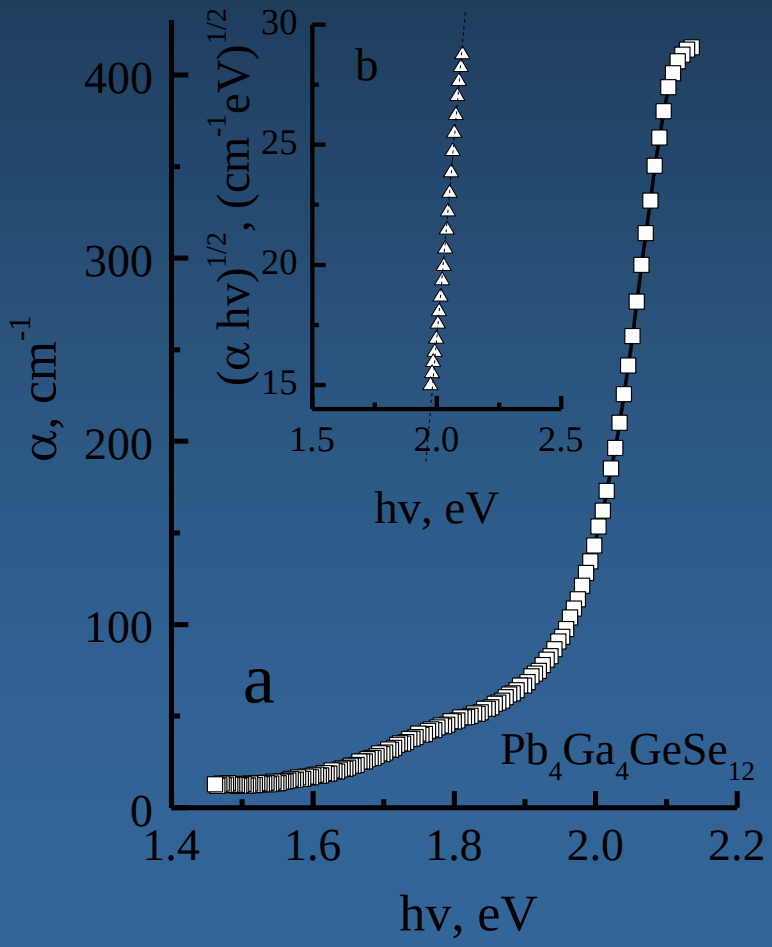


Optical absorption spectrum of the $Pb_4Ga_4GeS_{12}$ single crystal



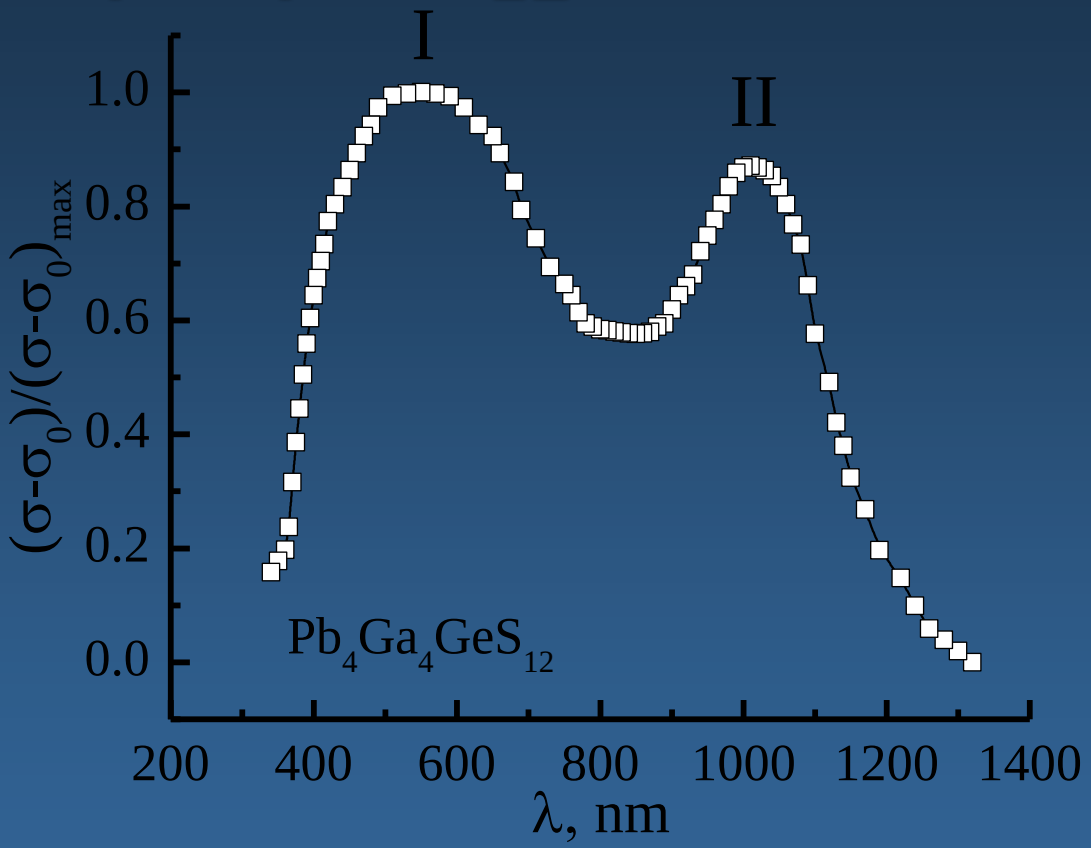
From the insert, approximated Eg = 2.28 eV

Optical absorption spectrum of the $Pb_4Ga_4GeSe_{12}$ single crystal



From the insert, approximated Eg = 1.86 eV

Photoconductivity of the $Pb_4Ga_4GeS_{12}$ single crystal

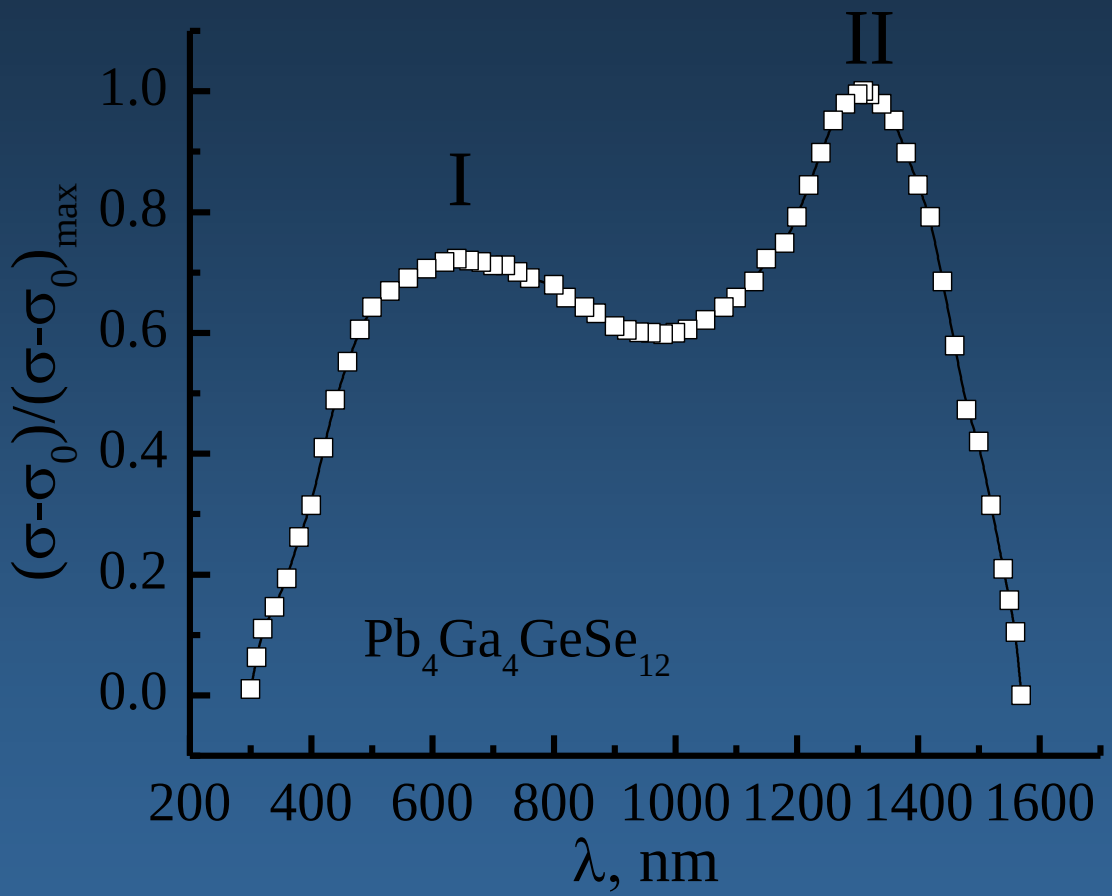


Peak I – 570 nm (2.17 eV) – intrinsic photoconductivity

Peak II – 1030 nm (1.20 eV) – admixture photoconductivity

Peak II likely corresponds to intrinsic defects V_S

Photoconductivity of the $Pb_4Ga_4GeSe_{12}$ single crystal



- Peak I – 680 nm (1.82 eV) – intrinsic photoconductivity
- Peak II – 1340 nm (0.92 eV) – admixture photoconductivity
- Peak II likely corresponds to intrinsic defects V_{Se}

Thank You for attention!

- For additional information:

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