

XLV.—*Melting Points of Certain Inorganic Substances.*

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THE following melting points have been determined by the method previously described by one of us (*Chem. Soc. J.*, **29**, 489; **33**, 273):—

	Melting point.	Mean.	Remarks.
Cuprous iodide, Cu_2I_2^* {	625 631 }	628	{ This compound decomposes in the air at a temperature near its m.p.; but if quickly heated its m.p. is reached before any perceptible decomposition has occurred.
Thallic oxide, Tl_2O_3 {	762 757 731 }	759	
Potassium bromate, KBrO_3 . . {	436 431 }	434	
Sodium perchlorate, NaClO_4 . {	481 483 }	482	{ Melts above 350° , <i>Watts's Dict.</i> , i, 672.
Silver perchlorate, AgClO_4 . . {	485 486 }	486	
Thallium perchlorate, TlClO_4 {	500 502 }	501	{ Prepared by saturating pure HClO_4 with the corresponding carbonates.
Barium perchlorate, $\text{Ba}(\text{ClO}_4)_2$ {	502 508 }	505	

Also the following alloys of the halogen compounds of silver, lead, and copper :—

* This compound and the alloys referred to below were prepared by Mr. G. F. Rodwell, *Phil. Trans.*, 1882, 1125.

	Melting point.	Mean.	Remarks.
(AgI, Ag ₂ Br ₂ , Ag ₂ Cl ₂)	385 376 387	383	
(AgI, AgBr, AgCl)	329 335 330	331	
(Ag ₂ I ₂ , AgBr, AgCl)	328 323	326	
(Ag ₃ I ₃ , AgBr, AgCl)	355 354	354	
(Ag ₄ I ₄ , AgBr, AgCl)	382 378	380	
(AgI, PbI ₂)	345 352 353 347	350	{ From bottom of cast rod. " " " " From top of ditto, after being once fused. Ditto, after frequent fusion.
(AgI, Cu ₂ I ₂)	352 513 514 515	514	
(2AgI, Cu ₂ I ₂)	491 501	496	
(3AgI, Cu ₂ I ₂)	493 495	494	
(4AgI, Cu ₂ I ₂)	479 492 505	493	Fused gradually.
(12Ag, Cu ₂ I ₂)	496 514 514	514	