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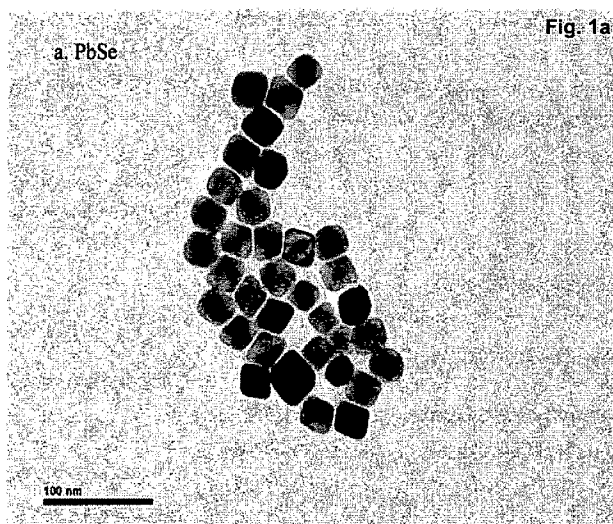
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(54) Title: METHODS OF FORMING A NANOCRYSTAL



(57) Abstract: Methods of forming a nanocrystal are provided. The nanocrystal may be a binary nanocrystal of general formula M1A or of general formula M1O, a ternary nanocrystal of general formula M1M2A, of general formula M1AB or of general formula M1M2O or a quaternary nanocrystal of general formula M1M2AB. M1 is a metal of Groups II - IV, Group VII or Group VIII of the PSE. A is an element of Group VI or Group V of the PSE. O is oxygen. A homogenous reaction mixture in a non-polar solvent of low boiling point is formed, that includes a metal precursor containing the metal M1 and, where applicable M2. For an oxygen containing nanocrystal the metal precursor contains an oxygen donor. Where applicable, A is also included in the homogenous reaction mixture. The homogenous reaction mixture is under elevated pressure brought to an elevated temperature that is suitable for forming a nanocrystal.

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