Patent Search

Invention Title	CRYSTAL DYNAMICS OF ZINC CHALCOGENIDES TO ANALYZE THE PHONON DISPERSION CURVES AND HARMONIC ELASTIC PROPERTIES
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Abstract:

A method for crystal dynamics of zinc chalcogenides to analyze the phonon dispersion curves and anharmonic elastic properties of ZnS. Heating the zinc growing org halide structures such as single crystal organometallic halide perovskites, methods of use, and devices incorporating organometallic halide structure. the reported so crystallization processes for perovskite single crystals suffer from very slow growth rates and no shape control over the resultant crystals. The phonon curves in the zi determined based on the crystallization using the properties of the zinc.

Complete Specification

Technical Field

[0001] The embodiments herein generally relate to a method and a system for crystal dynamics of zinc chalcogenides to analyze the phonon dispersion curves anharmonic elastic properties of ZNS.

Description of the Related Art

[0002] Attempts to incorporate the physical properties of nanocrystals, nanorods, and nanowires into films or bulk solids have led to the self-assembly of ordered nanoarrays. These self-assembled ordered nanoarrays have been produced from stable colloidal solutions of nanomaterials. For example, close-packed nanocrysta have been made by spin-coating or drop casting of colloidal solutions. Often these films show short range ordering, but forces such as entropy, electrostatics, and v Waals interactions can cause these materials to self-assemble into superlattices.

[0003] This considerable interest in perovskites is due to their properties. Some have been shown to possess long carrier diffusion lengths and a remarkably low t state densities, which may make these materials highly desirable for various applications. However, the reported solution crystallization processes for perovskite sir crystals suffer from very slow growth rates and no shape control over the resultant crystals

[0004] Some single-component and binary superlattices exhibit desirable physical and electronic properties, these materials are not robust enough for large scale advanced material applications and their synthesis is not general enough to provide easy production of idealized materials. The synthesis of solid state materials wi ordered arrays of nanoscale materials has progressed to the point where nanocrystals can be deposited in ordered arrays on a surface, the use of these ordered ar are hampered by the insulating ligands generally used in the manufacture of the nanocrystal. The practical use of these nanocrystals has been discovered through t

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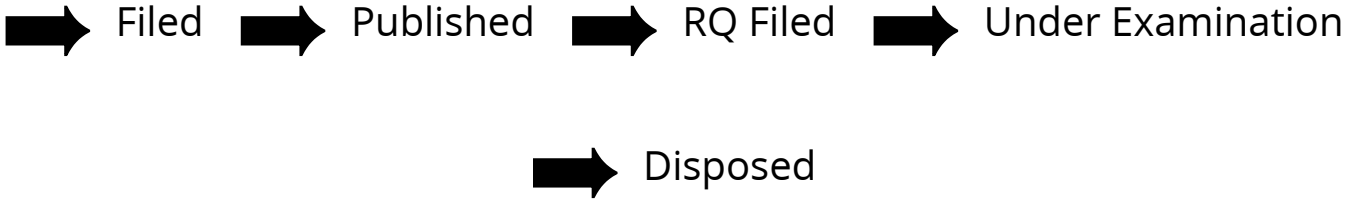

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