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(57) Abstract :

The present invention provides a process of electrodeposition of silicon nano-spheres. The present invention provides a process for electro deposition of silicon Nano-spheres using ionic liquid bath at room temperature comprising the steps of: 1. Determining the potential of the water contaminated ionic liquid, 2. Cleaning reenergizing the working electrodes, quasi-reference electrodes, and counter electrodes, 3. Determining the potential for the process of electrodeposition, 4. Electrodeposition of silicon Nano-spheres on working electrodes, quasi-reference electrodes, and counter electrodes, 5. Extraction of synthesized silicon Nano-spheres. The present invention further provides homogenously distributed stable silicon Nano -spheres that are synthesized by electrochemical process using water content in the ionic liquid at room temperature in relative open atmosphere containing inert gas and moisture level. FIG.3

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