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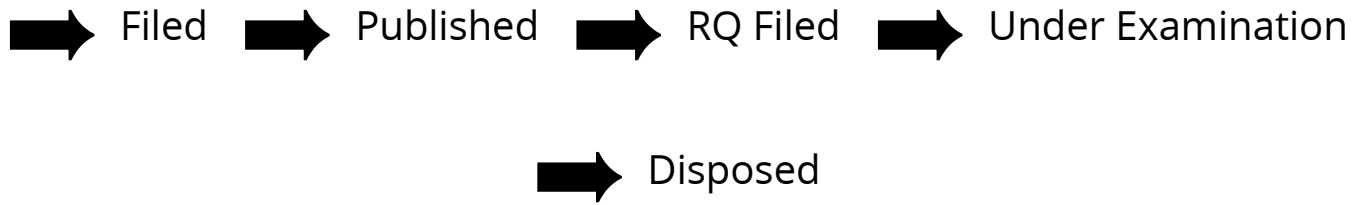
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(57) Abstract :

A submerged nanoporous micro hotspot structure (1) for solar desalination and method of preparation comprising a CAD models of micro structure CAD models of micro structure (1A), a printed mold microstructure (1B), and micro-structure pattern of aluminum surface (1C). Said structure (1) distributing heat to saline water through concentrated hotspots by absorbing photon energy from the sun through the nanopores and giving an efficient pathway to the water bubbles for better evaporation rate of saline water. The method of preparation of submerged nanoporous micro hotspot structure (1) for solar desalination comprises a plurality of steps. However, the performance of nanoporous micro hotspot structure (1) is determined by conducting experiments. The percentage efficiency for the evaporation of contaminated water for nanoporous micro hotspot structured AI sheet is 60%, 37%, and 24% for 50 ml, 100 ml, and 200 ml depths of water. The nanoporous micro hotspot structured AI sheet with 50 ml saline water attained the highest efficiency evaporation of 60%.

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