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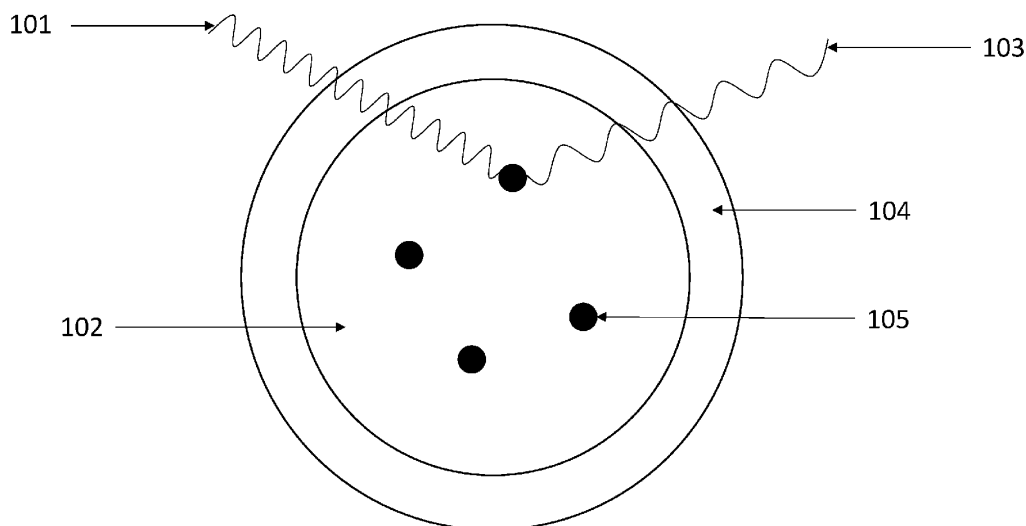
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(54) Title: PROTECTED QUANTUM DOTS FOR THERAPEUTIC, DIAGNOSTIC, AND OTHER USES



(57) Abstract: Protected quantum dots are protected from degradation, particularly in aqueous environments. The system comprises quantum dots, hydrophobic core, and hydrophilic shell. The quantum dots are entrapped in and protected by the hydrophobic core. The core polymer is covalently bonded to a hydrophilic shell polymer or protein. Quantum yield is better maintained than for non-encapsulated quantum dots in an aqueous environment. Optionally, ligands are attached to the hydrophilic shell to target delivery of the protected quantum dots. In an alternative embodiment, quantum dots are entrapped in the hydrophilic shell, or in both the shell and the core.

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