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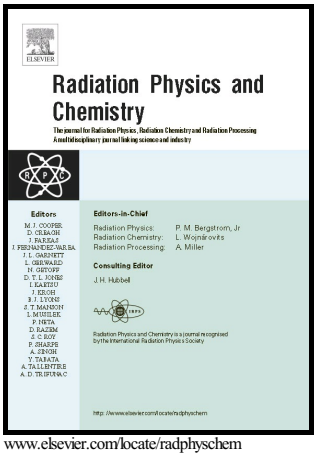

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Cadmium sulfide quantum dots/poly(acrylic acid-co-acrylic amide) composite hydrogel synthesized by gamma irradiation

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Abstract

To improve the durability and stability of quantum dots (QDs) in the composite hydrogel, an irradiation induced reduction and polymerization-crosslinking method was reported herein where CdS QDs could be synthesized in situ and fastened to polymer chains due to the coordination forces between amino groups and CdS nanoparticles. The morphology and photoluminescence (PL) property of the composite hydrogel were studied. The result indicated that the CdS QDs with uniform size were dispersed