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Quantum dot organic photo luminescent films prepared by photo polymerization

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The core-shell quantum dots CdSe/ZnS prepared by one-step synthesis method are evenly dispersed in the polymer. Adding the quantum dots into the polymer with solvent dilution is a common process, which makes the quantum dots well-disperse in polymer and coats on the substrate surface with removal of solvent by heating to obtain the resulting luminescent film. This process usually takes long time. In research, an alternative process of photo polymerization was employed to quickly obtain a smooth light-emitting film. This resultant light-emitting film can be used in Q-LED mixed-light-emitting component. Through adjusting the ratio of red and green quantum dots in UV-curing polymer film, a white light would be emitted using the exciting of blue-light LED on the UV-curing polymer film. This technology can be utilized to the display industry.

Biography

Cheng-Chun Chou has pursued his graduation from the Department of Chemical and Materials Engineering National Kaohsiung University. Presently he is a Graduate Student in Department of Chemical and Materials Engineering, National University of Kaohsiung, Taiwan. His research focuses on quantum dots and polymer composites which would use in wide range of applicability.

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