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Laser Processing for Fabrication of Silicon Nanoparticles and Quantum Dot Functional Structures

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Abstract: We have developed technologies for fabricating nanoparticles of high purity and homogeneous size, and for synthesizing them into new quantum functional structures, such as fine definition luminous devices. We have established a novel formation process for monodispersed semiconductor nanoparticles, by combining pulsed laser ablation for nanoparticle formation and a differential mobility analyzing system for size classification. Furthermore, we have successfully fabricated fine definition multi-color luminous devices with active materials of the monodispersed silicon nanoparticles.

Key Words: [Laser ablation](#), [Silicon](#), [Nanoparticles](#), [Size classification](#)[\[Image PDF \(755K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

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