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**Domain control of ZnO nanoparticles in a coaxial gas-flow pulse Ar/O<sub>2</sub> plasma** SATORU IIZUKA, HIROKI SHIRAHATA, Graduate School of Engineering, Tohoku University — A limited area, to which ZnO nanoparticles are selectively adhered, is called a domain. Formation of the domain was controlled by using a coaxial gas-flow pulse Ar/O<sub>2</sub> plasma. It was found that the mechanism of domain formation was closely related to the initial surface condition of Si substrate. Especially, the cleaning process was crucial. Here, we employed a patterning of the domain by using a fine mesh as a template. The formation processes were estimated by SEM and EDX. The technique developed here will be applied to a selective nanoparticle patterning.

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