

### Colloidal assembly using depletion interaction

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Periodic array of colloidal particle has great potential to make various devices especially with its distinctive optical property. Colloidal cluster which has anisotropic feature can be a building block of photonic crystal which has a large photonic band-gap. Various fabrication methods have been tried, however so far, it is not easy to achieve mass production of colloidal cluster. In this study, Using depletion interaction between anisotropic colloid particle which is called Pacman particle and simple sphere particle, we suggest a method for particle assembly to fabrication of flexible colloidal cluster with great productivity.