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Destabilization of the nano colloidal aggregation - a hybrid method of the control theory and molecular dynamics simulation -

Takenobu Nakamura[†]

Miki Kobayashi[†]

[†]Advanced Institute for Materials Research (WPI-AIMR), Tohoku University
2-1-1 Katahira, Aoba-ku, Sendai, Miyagi, Japan
Email: t.nakamura@wpi-aimr.tohoku.ac.jp

Abstract– We investigate how to destabilize the colloidal cluster. Different from the ordinary control theory, the destabilization is important for the chemical engineering of the colloidal dispersion. Adopting the control theory to describe the destabilization process of the colloidal aggregation to the dispersion, we consider how large amplitude of an external field is required to destabilize it. Moreover we investigate how we control and realize the external field experimentally by using molecular dynamics simulation.