



Magnetic Techniques for Molecular Diagnostics and Analysis of Biomolecules

Guest Editor:

Message from the Guest Editor

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Magnetic techniques rely on the manipulation and detection of biofunctionalized magnetic particles, which—depending on the application—are employed either as labels or probes. The most striking advantage in this regard is the ability to exert forces or torques onto magnetic particles by externally applied magnetic fields. For example, we can magnetically separate specific biomolecules from a bulk solution (‘magnetic washing’), to draw specific biomolecules towards certain regions (e.g. embedded sensors) in a fluid environment, to agitate magnetic particles and look at their dynamic response for biomolecular detection directly in the bulk sample solution, or to investigate biophysical properties by applying controlled forces or torques via bound magnetic probes. Furthermore, magnetic techniques enable highly competitive detection limits in molecular diagnostics.

To illustrate the numerous advantages offered by applying magnetic techniques to both the detection and biophysical investigation of biomolecules, viruses or cells, we kindly invite you to submit your manuscript(s) to this Special Issue. Full papers, communications, and reviews are all welcome.





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Message from the Editor-in-Chief

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