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Swift Cluster Ion Beams: Basic Processes and Applications

Guest Editor:

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Deadline for manuscript submissions:
closed (31 July 2022)

Message from the Guest Editor

In this Special Issue, we will provide a place to disseminate advanced research on the basic science and applications of the irradiation effect of swift cluster ion beams on materials. Topics covered include:

- Fundamentals of energy loss and linear energy transfer in matter.
- Secondary particle emission (electrons, atomic/molecular/cluster ions, etc.).
- Applications to surface analysis (two-dimensional molecular mapping with secondary ion mass spectrometry).
- Applications to surface/interface science and technology (modification, nanostructure formation, processing, etc.).
- Applications to bioscience (radiation damage to living organisms, DNA damage, irradiation-induced mutation, etc.).
- Cluster acceleration technology (generation, transportation, beam focusing (including microbeams), irradiation methods, etc.).

We are looking forward to your submission of highly novel and original research results.

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Message from the Editor-in-Chief

Quantum Beam Science focuses on application of quantum beams for the study and characterization of materials in their widest sense, and developments of quantum beam sources, instrumentation and facilities. Quantum beams include synchrotron radiation, neutron beams, electrons, lasers, muons, positrons, ions. The journal covers disciplines including, solid state physics, chemistry, crystallography, materials science, biology, geology, earth- and planetary materials, and engineering. Articles presenting multiple quantum beams for complementary studies are welcome.

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