

Special Issue

Modern Biological Applications of Nanoparticles: From Targeted Drug Delivery to Nanotheranostic and Beyond

Message from the Guest Editors

The mechanisms of interaction between nanoparticles and body proteins in the development of targeted nanoparticle delivery remain among these unresolved issues. An important level of interaction for nanoparticles in living systems is the spectrum of possible interactions with different types of cells and systems, especially with the circulatory system. Therefore, we welcome publications that present current approaches to noninvasive dynamic studies of the vascular system and hemodynamic parameters, which can contribute toward optimizing targeted nanoparticle delivery. An important fundamental problem remains the study of the interaction of such nanoparticles with living systems—both at the level of the individual cell and the entire organism. In particular, it is necessary to select such properties of nanoparticles that would ensure their prolonged circulation in the bloodstream, targeted accumulation in the tumor, minimal toxicity to normal cells, high contrast in imaging and significant anti-tumor effect. This Special Issue will therefore also include papers reflecting current advances in the application of nanoscale materials for research.

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Deadline for manuscript submissions

closed (24 February 2023)



Life

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Impact Factor 3.4
CiteScore 6.0
Indexed in PubMed



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