

# Special Issue in Green Processing and Synthesis: BIOMOLECULES-DERIVED SYNTHESIS OF NANOMATERIALS FOR ENVIRONMENTAL AND BIOLOGICAL APPLICATIONS

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## DESCRIPTION

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Nanoparticles possess exceptional characteristics due to their large surface area-to-volume ratio and unusual catalytic activity, optical properties, electronic properties, and antimicrobial activity. Different types of nanoparticles can be synthesized using different methods. Presently, the biogenic synthesis of nanomaterials is getting attention in the field of bio-nanotechnology. As compared to the chemical and physical method of synthesis, use of biogenic material is more environmentally friendly, cost-effective, and avoids the use of toxic chemicals. There is a better opportunity for green synthesis of nanomaterials using plants, bacteria, fungi, algae, waste materials to offer a large array of application but also respecting sustainability principles.

Biogenic synthesised nanomaterial has potential applications in environmental pollutant remediation and detection (nanosensors) and they also possess various biological applications: acting directly as active substances (such as antimicrobial, anticancer, and antioxidant) or offering opportunity for nanodelivery and bioimaging in diagnosis. The aim of this Special Issue is to gather recent research/review articles that highlight current research relevant to environmental and biomedical applications of biogenic nanomaterials. Proposed topics for this Special Issue are listed below.

## KEY TOPICS

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- ▶ Algae-based nanomaterials and their environmental and/or biomedical applications
- ▶ Plant-based nanomaterials and their environmental and/or biomedical applications
- ▶ Fungi-based nanomaterials and their environmental and/or biomedical applications
- ▶ Bacteria-based nanomaterials and their environmental and/or biomedical applications
- ▶ Yeast-based nanomaterials and their environmental and/or biomedical applications
- ▶ Green nanomaterials in nanosensors to diagnosis and/or pollutants' detection
- ▶ Antimicrobial activity of green nanomaterials
- ▶ Anticancer activity of green nanomaterials

- ▶ Antioxidant activity of green nanomaterial
- ▶ Photocatalytic activity of green nanomaterials
- ▶ Green nanomaterials as delivery vehicles
- ▶ Green nanomaterial in bioimaging
- ▶ Biocompatibility of green nanomaterials
- ▶ Challenges on applying green nanomaterial in environmental sciences and/or biomedical fields.

## HOW TO SUBMIT

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Before submission authors should carefully read the [Instruction for Authors](#). In order to make the preparation of manuscript easier, you are advised to use the [Manuscript Template](#).

All submissions to the Special Issue must be made electronically via the [ScholarOne submission system](#).

All manuscripts will undergo the standard peer-review process (single-blind, at least two independent reviewers). When entering your submission via online submission system please choose **“Special Issue: Biogenic nanomaterials”**.

Submission of a manuscript implies that the work described has not been published before and it is not under consideration for publication anywhere else.

The deadline for submissions is **March 31st, 2023**, but individual papers will be reviewed and published online on an ongoing basis.

Contributors to the Special Issue will benefit from:

- ▶ **indexation in Web of Science, SCOPUS, and many other services**
- ▶ quick and constructive peer review provided by experts in the field
- ▶ no space constraints
- ▶ convenient, web-based paper submission and tracking system – ScholarOne
- ▶ quick online publication upon completing the publishing process (**continuous publication model**)
- ▶ better visibility due to **Open Access**
- ▶ **long-term preservation** of the content (articles archived in Portico)
- ▶ extensive post-publication promotion for selected papers

We are looking forward to your submission!

In case of any questions please contact the Managing Editor of Green Processing and Synthesis (Dr. Krzysztof Dębniak, [gps.editorial@degruyter.com](mailto:gps.editorial@degruyter.com)).