

Semarang, 21 April 2026

To,

**The Editor-in-Chief**

**Greensphere: Journal of Environmental Chemistry (GJEC)**

Department of Chemistry, Faculty of Science and Mathematics

Universitas Diponegoro

Jl. Prof. Sudarto, SH, Tembalang, Semarang, Indonesia

**Subject: Submission of a Review Manuscript for Publication in Greensphere: Journal of Environmental Chemistry**

Dear Editor-in-Chief,

On behalf of my co-author, I am pleased to submit our manuscript entitled “**Green Synthesis of Silver Nanoparticles from Indonesian Medicinal Plants: Antibacterial and Biomedical Applications**” for consideration as a *review article* in *Greensphere: Journal of Environmental Chemistry* (eISSN 2777-0664).

We believe this manuscript is a strong fit for the *focus and scope* of GJEC, which publishes original research and reviews in Organic, Inorganic, Physical, Analytical Chemistry, and Biochemistry that support *green chemistry* and health. Our work provides an integrative review of the green synthesis of silver nanoparticles (AgNPs) using Indonesian medicinal plants as natural bioreductants and capping agents, thereby directly replacing toxic chemical reductants such as sodium borohydride and hydrazine. The review bridges three domains that lie at the core of GJEC: (i) the phytochemistry of Indonesian medicinal plants (flavonoids, phenolic acids, tannins, terpenoids, and saponins), addressing organic chemistry and biochemistry; (ii) the reduction of  $\text{Ag}^+$  to  $\text{Ag}^0$  and the subsequent colloidal stabilization, addressing inorganic and physical chemistry; and (iii) the characterization of the resulting nanoparticles (UV-Vis, FTIR, XRD, SEM/TEM, DLS, and *zeta potential*), addressing analytical chemistry. All discussions are oriented toward health applications, particularly antibacterial activity against ESKAPE pathogens and MRSA, which the World Health Organization has identified as global priorities.

The original contribution of this manuscript is to provide the first integrative review that specifically maps the Indonesian evidence base, rather than presenting a generic global survey. We examine locally significant species such as *Moringa oleifera* (kelor), *Curcuma longa* (kunyit), *Areca catechu* (pinang), *Cratoxylum glaucum* (pucuk idat), and *Baccaurea racemosa* (kepundung), and place them alongside the international literature to identify research gaps that are strategically accessible to Indonesian laboratories. A comparative table of nine representative plant-mediated AgNP systems is presented, detailing synthesis conditions, surface plasmon resonance (SPR) maxima, particle size, morphology, and antibacterial activity.

**Declarations of Ethics and Originality:**

- This manuscript is the authors' original work; it has not been published previously and is not under consideration for publication elsewhere.
- All authors have read and approved the final version of the manuscript and agree to its submission to *Greensphere: Journal of Environmental Chemistry*.
- All cited sources are fully acknowledged in the reference list, and the manuscript has been checked to be free from plagiarism.
- The authors declare no financial or personal conflicts of interest that could have influenced the content of this manuscript.

- As this is a *review article*, no new primary data were generated; all information synthesized herein is drawn from previously published sources listed in the reference list.
- Each author's contribution is specified in the *Author Contributions* section of the manuscript.
- We fully agree to the publication, peer-review, and copyright policies of GJEC.

We hope this manuscript merits consideration for publication in *Greensphere: Journal of Environmental Chemistry*, a SINTA 3-accredited journal, and that it may contribute meaningfully to the *green chemistry* literature grounded in Indonesia's remarkable biodiversity. We sincerely appreciate the time, attention, and constructive feedback of the Editorial Board and the reviewers throughout the review process.

Thank you for your kind consideration of our submission.

Sincerely,

**Fitra Adi Prayogo, S.Si., M.Si.**

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