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## Toward greener synthesis of gold nanomaterials: From biological to biomimetic synthesis (Review)

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### Abstract

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In the past two decades, the use of biomolecules, either from biological or biomimetic systems (or so-called biological or biomimetic synthesis), has emerged as a promising green approach to synthesize gold nanomaterials (Au NMs). Here, we describe recent progress on the biological and biomimetic syntheses of Au NMs. We focus our discussions on the selection principles of biomolecules, synthesis mechanisms involving biomolecules, recent evolution from biological to biomimetic synthesis, and the contributions of bioinspired synthesis to green production of Au NMs. We hope this review will provide a guideline for the green synthesis of Au NMs and other metal NMs, further paving their way toward practical applications in the field of biomedicine. © 2020 Elsevier B.V.

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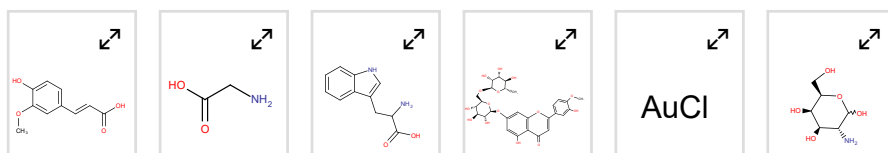
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