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Invited Article

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Nanomanufacturing of Bioinspired SurfacesJiyu Sun^{1*}, Bharat Bhushan^{2*}

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Abstract:

The development trend of materials is complex, intelligent and dynamic, and bioinspired materials have all these characteristics. Bioinspired materials development will affect the improvement of human body organ replacements, aircraft, rockets, and other consumer products. The ultimate goal of the field of biomimetics is to produce functional biomaterials at the nanoscale, because the structures of natural materials' surfaces are micro - and nanoscale, such as lotus leaf, rice leaf, cicada wing, butterfly wing, gecko foot, snail shell, fish scale, shark skin, and pitcher plant. Various nanomanufacturing techniques can be used to fabricate the desired nanomorphology. In this paper, an overview of the nanomanufacturing methods for fabrication of bioinspired surfaces is presented.

Key words: Nanomanufacturing, Nanomaterials, Bioinspired surfaces, Biomimetics, Nanotechnology, Bio-technology

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