

## عنوان مقاله:

Biological Applications of Bacterial Nano-Surface Layers : A Brief Overview

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## نویسندگان:

Karim Khanmohammadi Chenab - *Catalysts and Organic Synthesis Research Laboratory, Department of Chemistry, Iran University of Science and Technology, Tehran, ۱۶۸۴۶-۱۳۱۱۴, Iran*

Reza Eivazzadeh-Keihan - *Catalysts and Organic Synthesis Research Laboratory, Department of Chemistry, Iran University of Science and Technology, Tehran, ۱۶۸۴۶-۱۳۱۱۴, Iran*

Paria Pashazadeh-Panahi - *Department of Biochemistry and Biophysics, Metabolic Disorders Research Center, Gorgan Faculty of Medicine, Golestan University of Medical Sciences, Gorgan, Golestan Province, Iran*

Ahad Mokhtarzadeh - *Immunology Research Center, Tabriz University of Medical Sciences, Tabriz, Iran | Department of Biotechnology, Higher Education Institute of Rab-Rashid, Tabriz, Iran*

## خلاصه مقاله:

Surface layer as the outer protective coverage of bacteria and archaea are two-dimensional crystalline and symmetrical arrays of proteins that recently attract a lot of attention for biologist scientists. The surface layers of bacteria are usually 5 to 10 nm in diameter and represent highly porous protein lattices with uniform size and morphology with the pore sizes of 2 to 8 nm. The crucial and most prominent property of this protein-based layer is the regular morphology and suitable chemical composition for different biological applications. Although the formation mechanism of surface layers is different from one type of cell to another once, the surface layer protein molecular compositions almost are same for all types. Recently, the biological application of surface layers opens a prominent research fields in surface biological science such as nano-biotechnology adhesion, vaccination, pharmaceutical, biosensors, bioremediation and mineralization application. In this mini review, we discussed about the main application of this nano-layer in biological systems.

## کلمات کلیدی:

Biosensors, Boremediation, Bacteria, Pharmaceutical application, Surface layer

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