

# Microbialcrete composite

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**In news**— A faculty member at the National Institute of Technology – Karnataka (NIT-K), Surathkal, has recently received an **Indian patent for producing cement mortar brick with inclusion of bacteria in combination.**

- The **cement mortar brick is claimed to be superior to the conventional ones** in terms of strength and life of the structure and possess a self-healing property.
- According to faculty member, **microbialcrete composite is a new-age material with the property of self-healing upon cracking.**
- This action is by the **precipitation of lime (calcium carbonate) by the non-pathogenic bacteria** used in the composite, upon coming into contact with air and water through the crack.
- The precipitated lime will cover the crack, thereby improving the stability of the surface.
- **The non-pathogenic bacteria of genus Enterobacter, Enterococcus and Serratia, and its growth solution are part of this invented composite** along with sand and cement.
- **This invention is not limited to this specific system** but using the same technique, development of biocement and bioconcrete are feasible, towards which a research group under the faculty is working on.
- **Microbial Crete Composite cement mortar has the potential for large scale use in the construction industry such as to enhance stability of nuclear power reactors,** medical storage structures, retaining walls, embankments and dams etc.