

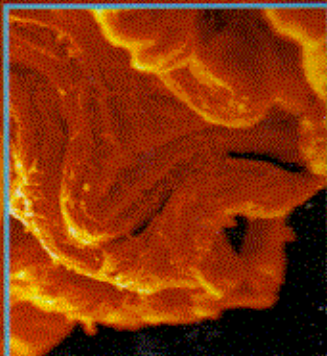
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Front Cover:

A scanning electron micrograph shows a biofilm of *Bacillus subtilis* soil bacteria. (The biofilm was fixed and coated with gold to reflect incident electrons.) The bacteria grow in long, tough chains, which are impervious to many antibiotics. These complex chains form patterns that are of great interest to materials scientists because the chained patterns depend on the surface structure of the material upon which the bacteria grows. Bacterial growth on surfaces is important because biofilms may contaminate implanted medical devices such as artificial joints. So, if microbiologists can discover a surface structure that inhibits biofilm formation, it may help in the future design of improved medical devices. *Bacillus subtilis* growth and development provides an important model system for the growth of Gram-positive pathogens as well as environmental soil bacteria.

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