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UV irradiation of biomarkers adsorbed on minerals under Martian-like conditions: hints for life detection on Mars

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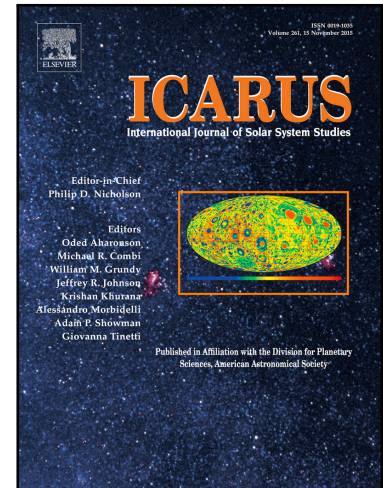
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**Highlights**

- Martian-like atmosphere and temperature favor better preservation of nucleotides
- Hematite catalyzes in small extent degradation of nucleotides in Martian conditions
- Apatite and serpentines catalytic effect in Martian conditions is negligible
- Labradorite, forsterite, and natrolite promote photodegradation of nucleotides
- ToF-SIMS, Raman and IR are complementary techniques for biomarkers detection

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