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The Discovery of Silicon Oxide Nanoparticles in Space-weathered of Apollo 15 Lunar Soil Grains

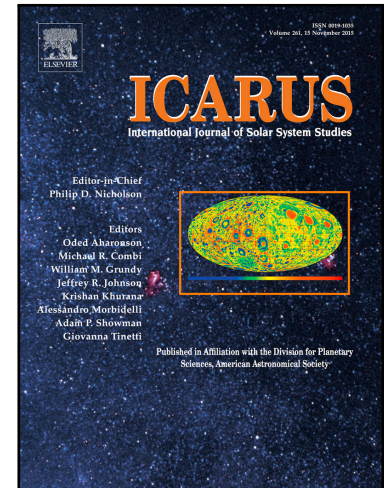
Lixin Gu , Bin Zhang , Sen Hu , Takaaki Noguchi , Hiroshi Hidaka , Yangting Lin

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Highlights

- The space weathering features of Apollo-15 lunar soil pyroxene and the adhered submicron-sized fragments were studied with FIB-TEM.
- The npSiO_x particles, as the by-product of space weathering, were observed for the first time in the Mg-Fe silicate fragment.
- The coexisting npSiO_x and npFe were probably formed directly in micrometeorite shock-induced melt, instead of in a solar-wind generated vapor deposit or irradiated rim.

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