

## Charging properties of Itokawa grains returned by the Hayabusa mission

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While Itokawa physical properties have been extensively studied remotely [1,2] and in laboratory environments since Hayabusa returned samples (see e.g. [3,4,5] and references therein), relatively little is known about the properties leading to regolith charging, potential grains mobilization in the vicinity of the asteroid surface and interactions with surface exploration units (landers) and associated instrumentation. We are proposing a method to evaluate for the first time at grain scale secondary emission properties and grain capacitance. We will present preliminary results of such investigation applied to a number of terrestrial analogs and Hayabusa samples RB-QD04-0072 and RA-QD02-0126-02.

**References:** [1] M. Abe et al , *Science*, 2006: Vol. 312 no. 5778 pp. 1334-1338 [2] P.A. Abell et al, *Meteoritics & Planetary Science*, 2007, Volume 42, Issue 12, pages 2165–2177, [3] Noguchi et al. , 2014, *Earth, Planets and Space*, 66:124 [4] T. NAKAMURA et al, 2014, *Meteoritics & Planetary Science*, 49, Nr 2, 215–227 (2014)[5] A. TSUCHIYAMA et al, 2014, *Meteoritics & Planetary Science*, 49, Nr 2, 172–187