

## **Basic properties and potential application of CLDS-i lunar dust simulant**

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Lunar dust can make serious damage to the space probe, space suit, and health of astronaut, that is one of the most important problems faced in lunar manned exploration [1, 2]. In the case of rare lunar dust sample, CLDS-i lunar dust simulant with high similarity to the real lunar dust is an important base for studying dust protection and dust toxicity. The CLDS-i lunar dust simulant developed by the Institute of Geochemistry Chinese Academy contains >60% glass and a little nanophase Fe<sup>0</sup>, and has a median particle size about 500-600nm. The CLDS-i lunar simulant particles also have complicated shape and sharp edges. These are similar to those of lunar dust, and make the CLDS-i can be applied to many fields such as the scientific research, the treatment technology and toxicological study of lunar dust.

[1] Cain (2010) *Earth Moon and Planets* 107, 107-125. [2] Khan-Mayberry (2008) *Acta Astronautica* 63, 1006-1014.