

Supporting Information

Preservation phenomena of methane hydrate in pore spaces

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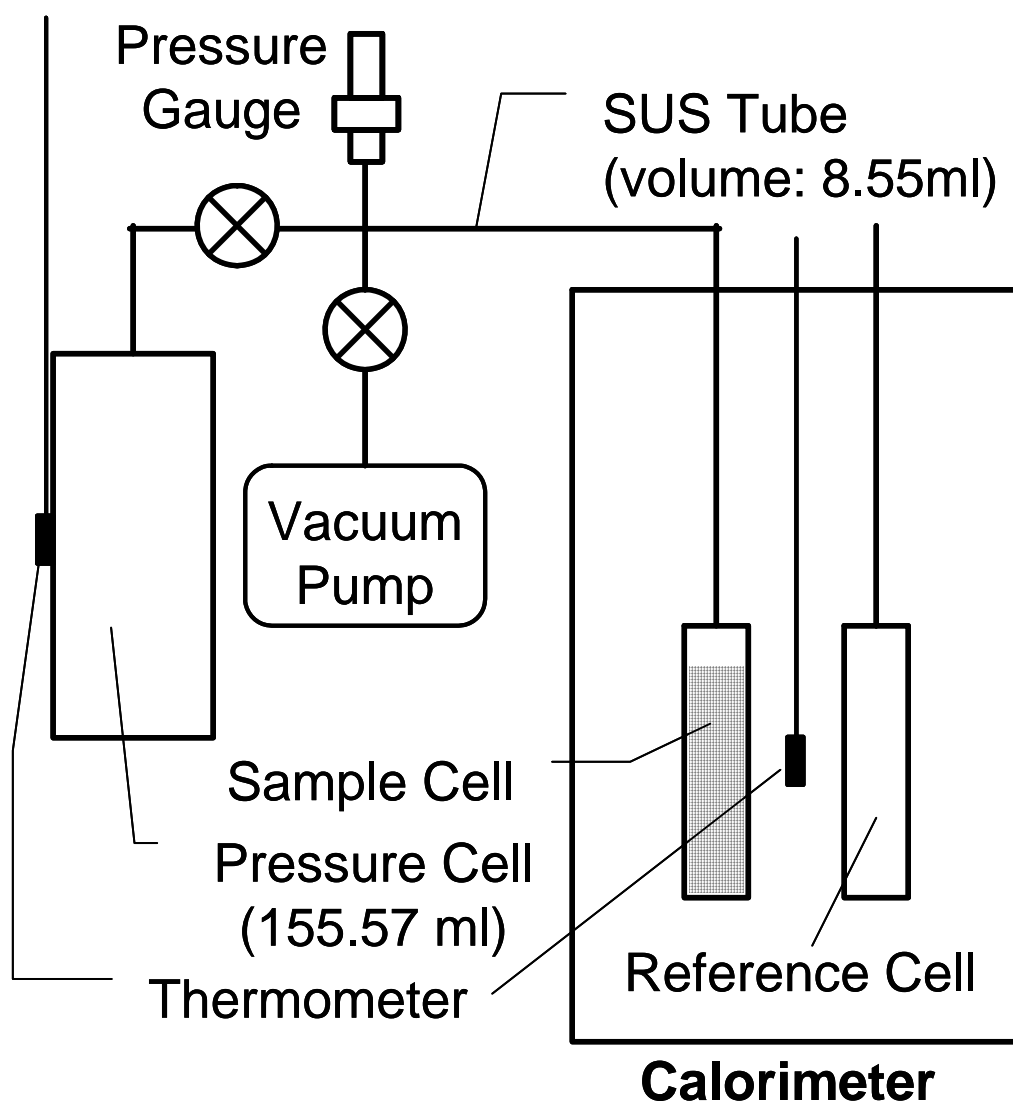


Fig. S1. Schematic view of the calorimetric system.¹

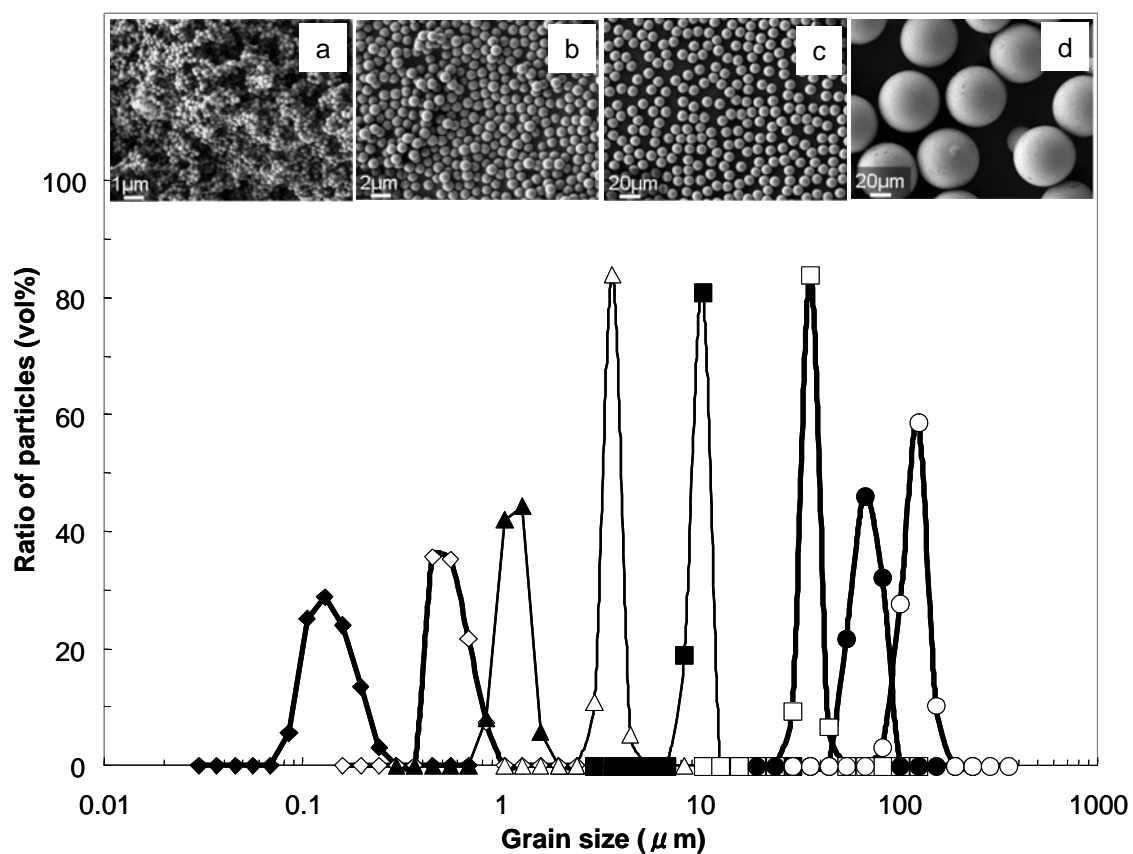


Fig. S2. Grain-size distribution of glass beads measured using a laser diffraction particle-size analyzer (SALD-2100, Shimadzu Corporation, Kyoto, Japan) and images of the beads using FE-SEM (JSM-7400F, JEOL Ltd., Tokyo, Japan). (a) N2N, (b) N3N 0.98 μm , (c) N3N 8.66 μm , (d) GBL-60.

Table S1 Characteristics of glass beads and water contents of samples. The grain-size distributions were measured using a laser diffraction particle-size analyzer (SALD-2100, Shimadzu Corporation, Kyoto, Japan).

Size of particles, μm	Type of specimens (Company)	Material	Water content (MH+glass beads), %	Water content (ice+glass beads), %
100.36(7)	SPL-100 (UNITIKA)	CaO-Al ₂ O ₃ -SiO ₂ GLASS	18.1	16.1
56.33(7)	GBL-60 (The Association of Powder Process Industry and Engineering)	CaO-Al ₂ O ₃ -SiO ₂ GLASS	14.1	—
30.82(5)	GBL-30 (The Association of Powder Process Industry and Engineering)	CaO-Al ₂ O ₃ -SiO ₂ GLASS	16.1	17.9
8.66(5)	N3N (UBE-NITTO KASEI CO., LTD.)	SiO ₂ GLASS (99.9%)	18.6	—
3.15(5)	N3N (UBE-NITTO KASEI CO., LTD.)	SiO ₂ GLASS (99.9%)	21.0	—
0.98(7)	N3N (UBE-NITTO KASEI CO., LTD.)	SiO ₂ GLASS (99.9%)	17.6	—
0.44(8)	COSMO 55 (JGC C&C)	SiO ₂ GLASS (99.9%)	18.4	16.9
0.11(10)	N2N (UBE-NITTO KASEI CO., LTD.)	SiO ₂ GLASS (99.9%)	20.3	15.5

Reference

- 1 A. Hachikubo, R. Nakagawa, D. Kubota, H. Sakagami, N. Takahashi and H. Shoji, Proceedings of the 6th International Conference on Gas Hydrates, Vancouver, 2008.