**ELECTRONIC SUPPLEMENTARY INFORMATION**

**Effective Control of Gas Hydrate Dissociation above the Melting Point of Ice**

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**Additional data**

The change in $P/P_f$ of pure THFh (0.20 g) with grain sizes of 1–2 mm under methane atmosphere was measured with the same protocol as MH and MH-THFh. As shown in Fig. S1, $P/P_f$ remained constant at 1.0 during the temperature ramping, suggesting that effect of methane trapping into THFh cavities from the vapor phase on the ratio of $P/P_f$ during the temperature ramping tests in the present study is negligible.

![Graph showing the change in ratio of corrected pressure ($P/P_f$) of pure THFh under methane atmosphere during temperature ramping. Solid vertical line indicates the melting point of ice. Dashed vertical line indicates the THF hydrate dissociation temperature in the literature.](image-url)

Fig. S1 Change in the ratio of the corrected pressure ($P/P_f$) of pure THFh under methane atmosphere during temperature ramping. Solid vertical line indicates the melting point of ice. Dashed vertical line indicates the THF hydrate dissociation temperature in the literature.