Supporting Information

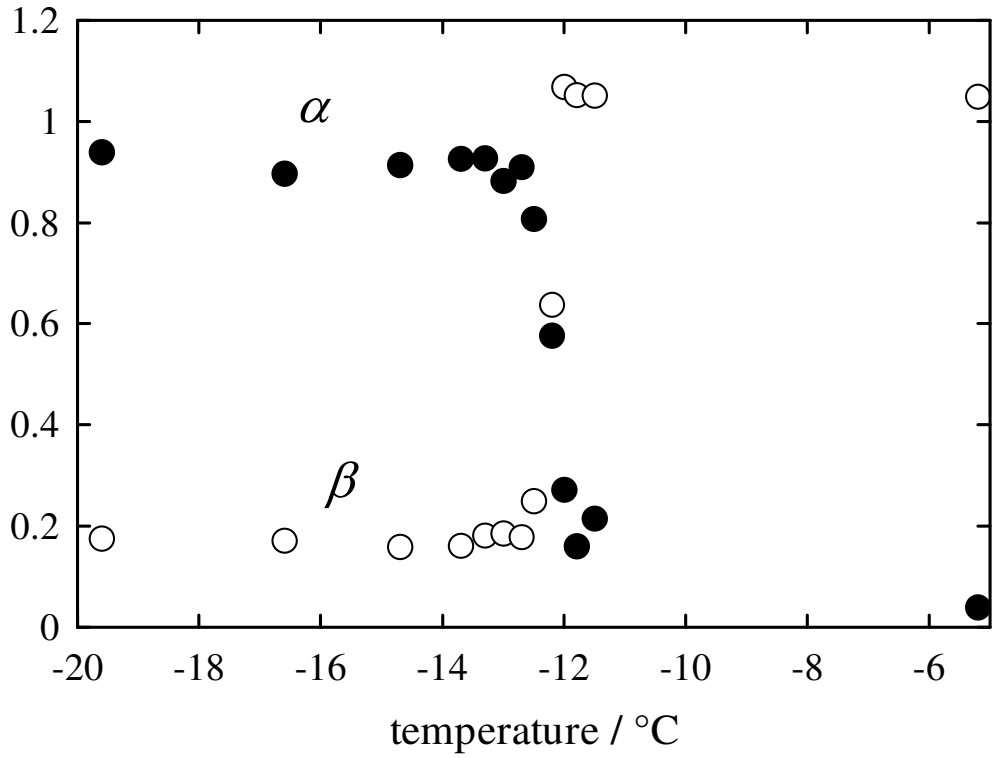

Figure S1 Detection of eutectic transition of 3 mM RbBr-doped ice by a change in XAFS spectra at the Br-K edge . The spectra were analyzed by the following linear combination.

$$\chi=\alpha\chi_{cryst}+\beta\chi_{hyd}$$

where χ, χ_{cryst}, and χ_{hyd} are the χ spectra of the sample, RbBr crystal, and hydrated Br^-, respectively, and α and β denote the contribution from the salt crystal and hydrated ion, respectively. The detail for the data analysis is given in our previous paper.[35]

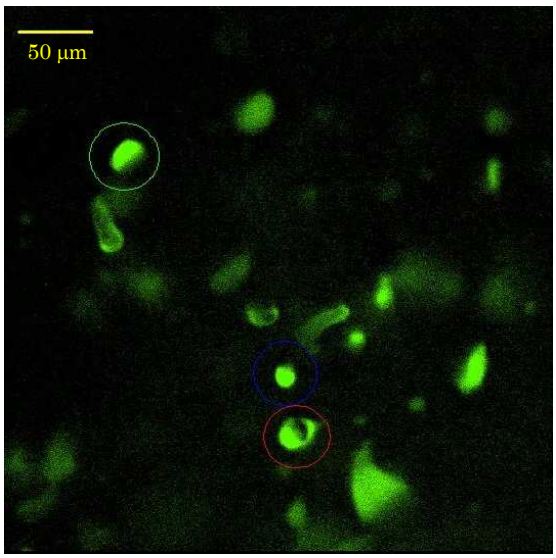

Figure S2 Confocal fluorescence image from frozen 60 mM KCl at -6 ˚C.

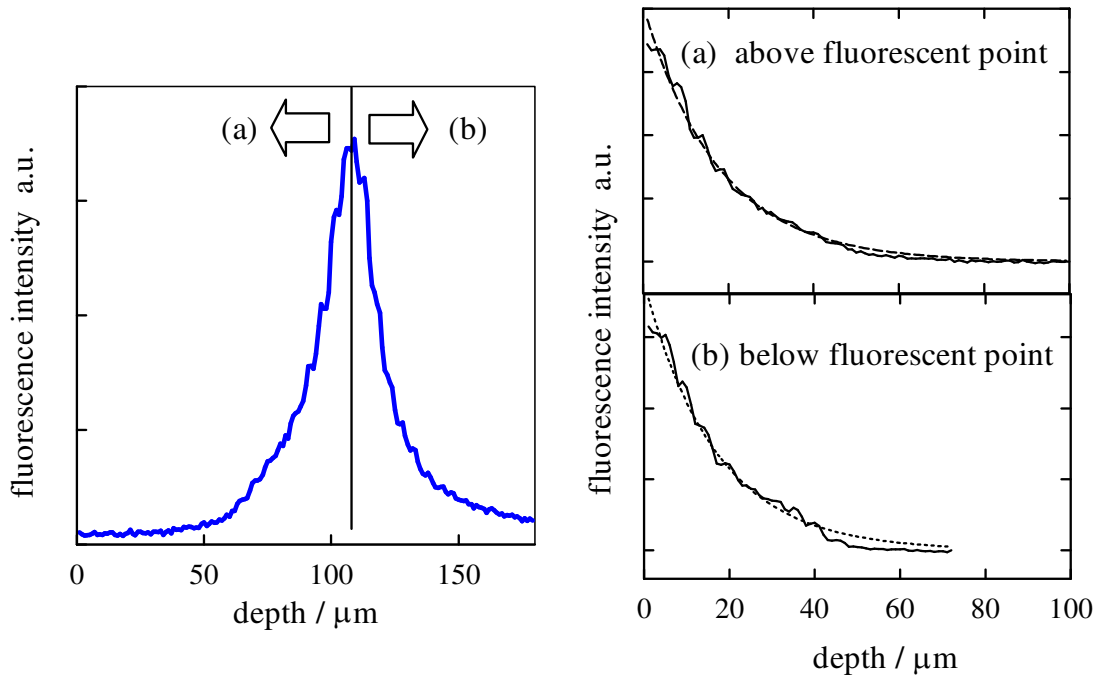

Figure S3 Fluorescence intensity profile in the depth direction with a 1 mm PS particle embedded in ice. Broke curves in the right figures are the results of fitting to an exponential function represented by

$I=I_0\exp(-kx)$

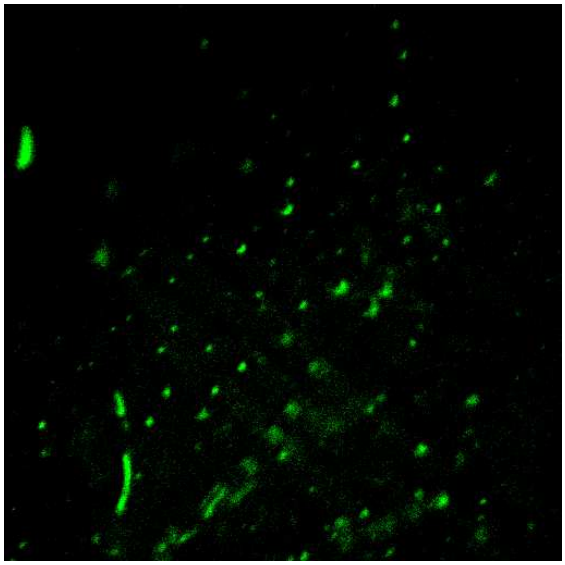

Figure S4 Confocal fluorescence image from frozen 6 μM $MgCl_2$, 12 μM HQS and 10 mM KCl at -6 ˚C.