Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Electronic Supplementary Information (ESI)

Relationship between Force Curve Measured by Atomic Force Microscopy in Ionic Liquid and its Density Distribution on a Substrate

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Figure and Tables

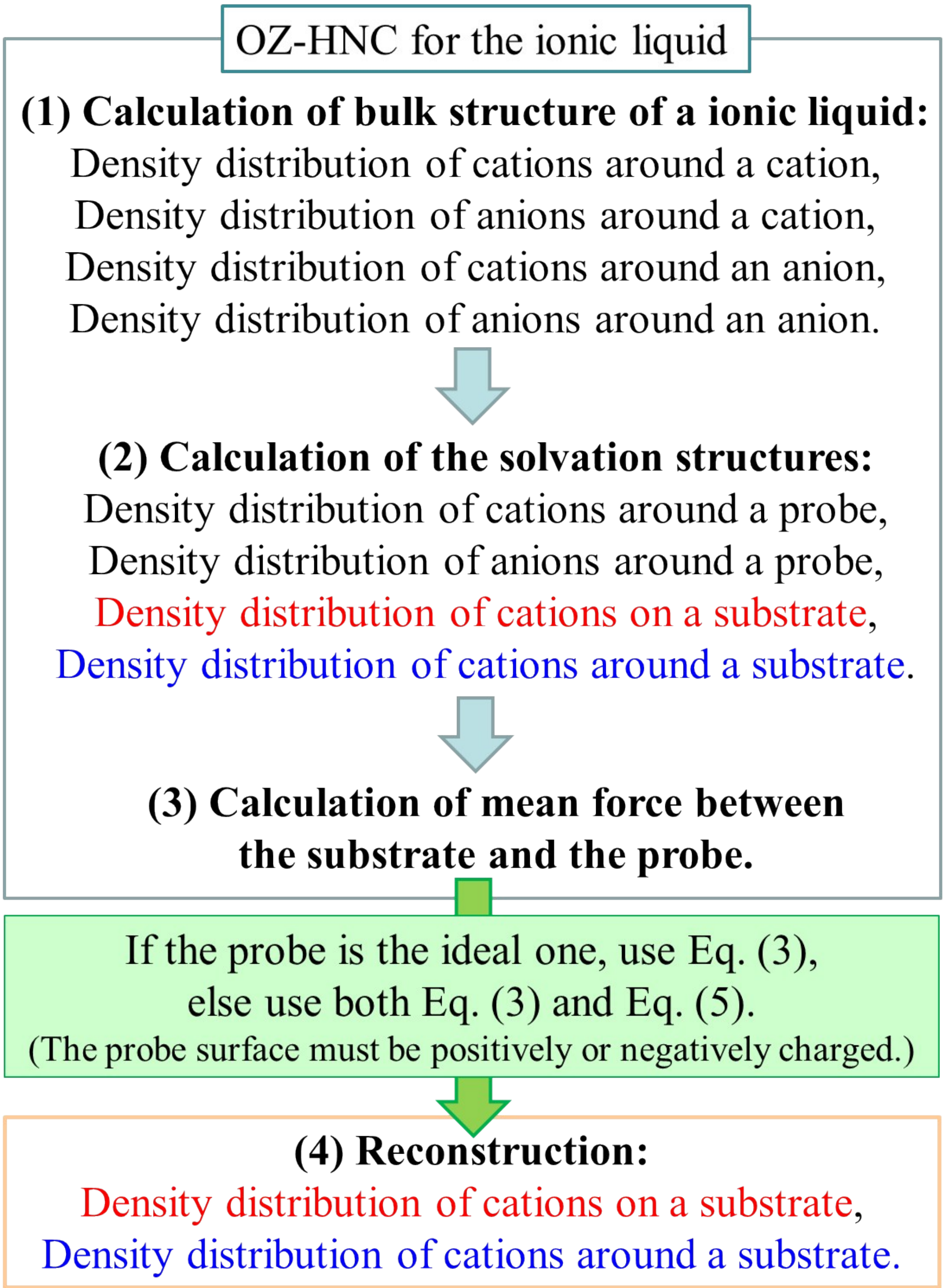

Fig. S1 Overview of the calculation process.

Table S1 Values of C^* for conditions written in Fig. 7, where $\sigma_B = 0$. The value of C^* increases with increase in d_P. The value of C^* for large $|\sigma_P|$ is smaller than that for small $|\sigma_P|$.

d_P (m)	σ_P (C/nm^2)	C^*
$2d_0$	$\pm\sigma_0$	0.4356
$2d_0$	$\pm\sigma_0/2$	0.8553
$3d_0$	$\pm\sigma_0$	0.3088
$3d_0$	$\pm\sigma_0/2$	0.7944
$4d_0$	$\pm\sigma_0$	0.2431
$4d_0$	$\pm\sigma_0/2$	0.7459

Table S2 Values of C^* for conditions written in Fig. 8(a), where $\sigma_B = -\sigma_0$. The value of C^* decreases with increase in d_P. The value of C^* for large σ_P is larger than that for small σ_P.

d_P (m)	σ_P (C/nm^2)	C^*
$2d_0$	$+\sigma_0$	0.8312
$2d_0$	$+\sigma_0/2$	0.4324
$3d_0$	$+\sigma_0$	0.5413
$3d_0$	$+\sigma_0/2$	0.2798
$4d_0$	$+\sigma_0$	0.4094
$4d_0$	$+\sigma_0/2$	0.2107

Table S3 Values of C^* for conditions written in Fig. 8(b), where $\sigma_B = -\sigma_0$. The value of C^* decreases with increase in d_P. The value of C^* for large $|\sigma_P|$ is larger than that for small $|\sigma_P|$.

d_P (m)	σ_P (C/nm^2)	C^*
$2d_0$	$-\sigma_0$	0.8273
$2d_0$	$-\sigma_0/2$	0.4237
$3d_0$	$-\sigma_0$	0.5563
$3d_0$	$-\sigma_0/2$	0.2762
$4d_0$	$-\sigma_0$	0.4311
$4d_0$	$-\sigma_0/2$	0.2116