

## Electronic Supporting Information (ESI)

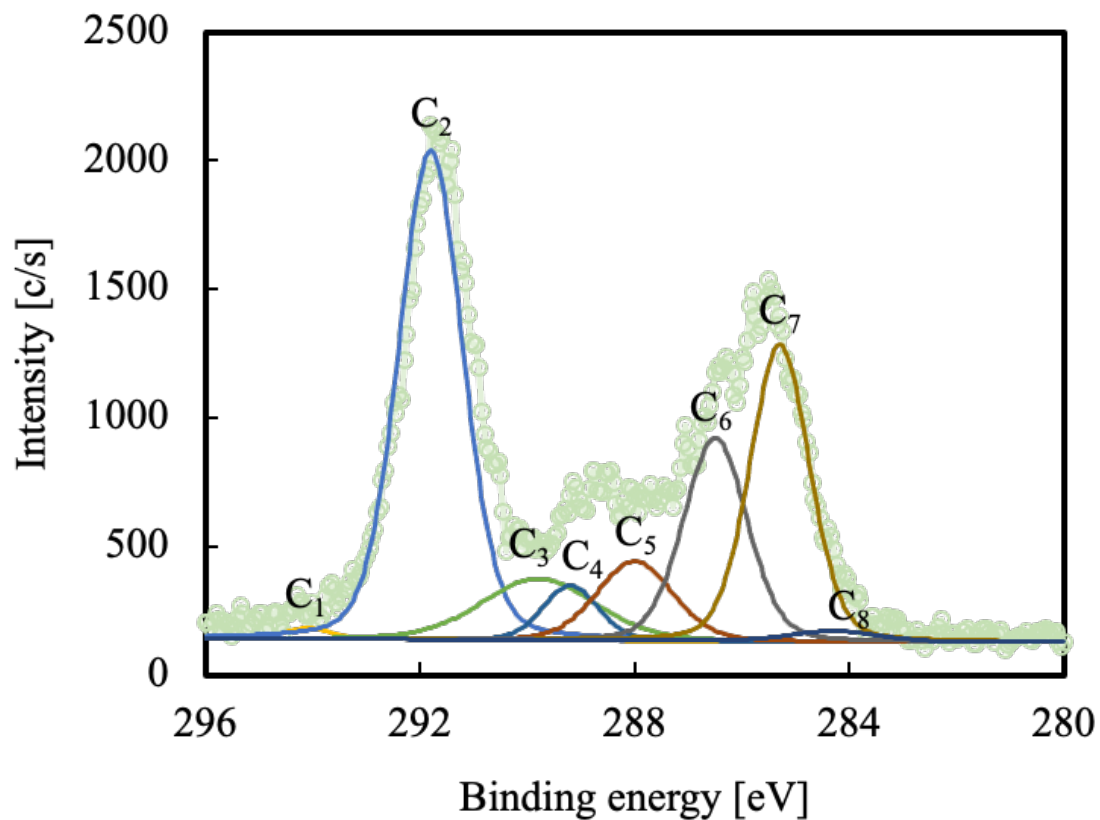
Flexible selection of the functional-group ratio on a polytetrafluoroethylene (PTFE) surface using a single-gas plasma treatment

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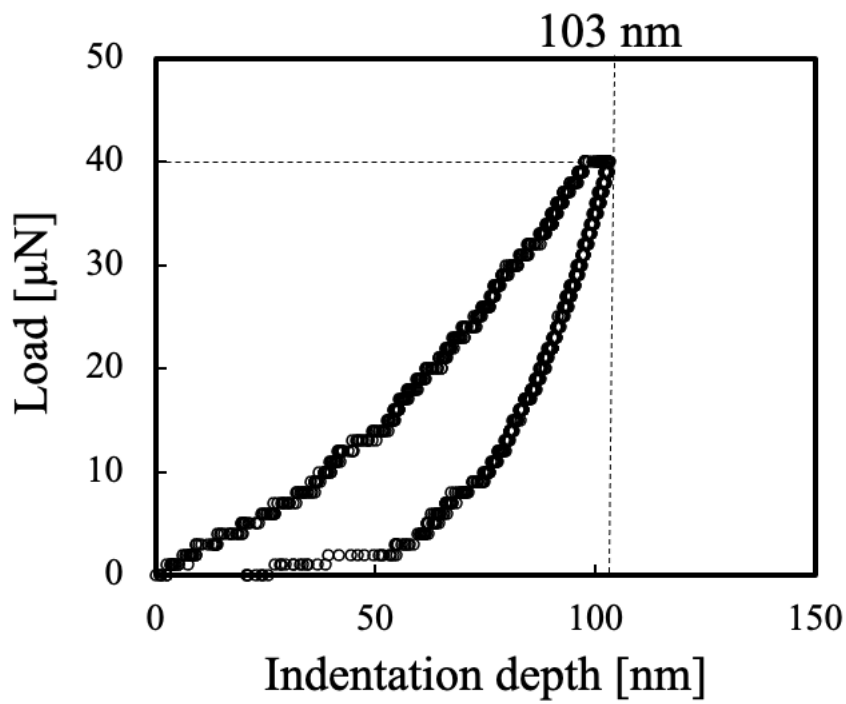
- Representative result of peak resolution of C1s-XPS spectrum ..... **ESI-1**
- Representative group ratios of PTFE surface ..... **ESI-2**
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**ESI-1** Representative result of peak resolution of C1s-XPS spectrum (in the case of HAP treatment at BP = 9 Pa). Group ratios of fluorine, oxygen, and carbon on the PTFE surface, as shown in Table 1, were calculated using the XPS analysis software (XPSPEAK41).

**ESI-2** Representative group ratios of PTFE surface (in the case of HAP treatment at BP = 9 Pa). The group ratios were calculated by the sum of peak area ratios in Fig. S1.

Sample name	Functional group	Peak area ratio	Total
Fluorine group	C <sub>1</sub> : CF <sub>3</sub>	3%	<b>47%</b>
	C <sub>2</sub> : CF <sub>2</sub>	32%	
	C <sub>3</sub> : C–F	12%	
Oxygen group	C <sub>4</sub> : O–C=O	5%	<b>26%</b>
	C <sub>5</sub> : C=O	7%	
	C <sub>6</sub> : C–O	14%	
Carbon group	C <sub>7</sub> : C–C	25%	<b>27%</b>
	C <sub>8</sub> : C=C	2%	



**ESI-3** Representative load-depth curve of PTFE surface using a nanoindenter (in the case of As-received).