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2 **Supplementary Table 2. Simulated strain and corresponding Raman shift for suspended and**
3 **supported MoS₂ at selected temperatures.**

<i>T</i> (K)	100	200	300	400	500
ε_{sus} (%)	0.000532	0.000427	-0.000040	-0.000692	-0.001335
ε_{sup} (%)	0.000669	0.000535	-0.000050	-0.000862	-0.001660
$\Delta\omega_{sus}^S(T)$ (cm ⁻¹)	-0.0708	-0.0567	0.0053	0.0920	0.1776
$\Delta\omega_{sup}^S(T)$ (cm ⁻¹)	-0.0890	-0.0712	0.0066	0.1147	0.2208

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