Electronic Supplementary Material (ESI) for RSC Advances. This journal is © The Royal Society of Chemistry 2019

## **Supplementary Information**

## Temperature dependence of interfacial bonding characteristics of silica/styrene butadiene rubber composites: A molecular dynamics simulation study

Yanlong Luo,\*a,b Haobei Liu, Bo Xiang,a,b Xianling Chen,a Wei Yangd and Zhenyang Luo \*a,b

<sup>&</sup>lt;sup>d</sup>State Key Laboratory of Advanced Power Transmission Technology, State Grid Global Energy Interconnection Research Institute, Beijing 102211, China

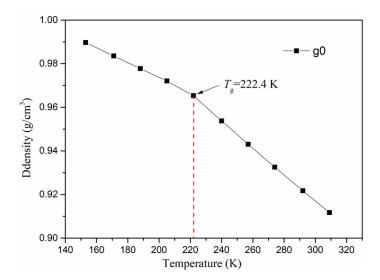


Figure S1 The curve of density with temperature

<sup>&</sup>lt;sup>a</sup>College of Science, Nanjing Forestry University, Nanjing 210037, China

<sup>&</sup>lt;sup>b</sup>Institute of Polymer Materials, Nanjing Forestry University, Nanjing 210037, China

<sup>&</sup>lt;sup>c</sup>College of Materials Science and Engineering, Nanjing Tech University, Nanjing 21009, China

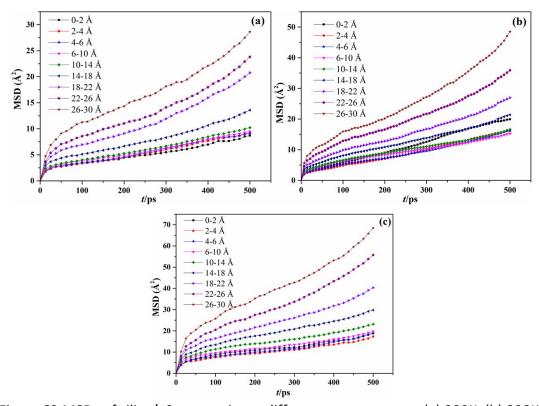


Figure S2 MSDs of silica/g0 composite at different temperatures: (a) 200K, (b) 298K, and (c) 373K.

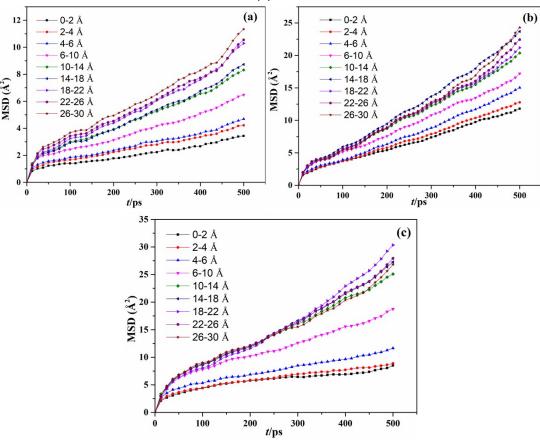


Figure S3 MSDs of silica/g15 composite at different temperatures: (a) 200K, (b) 298K, and (c) 373K.