Supporting Information

Superhydrophilic antireflective periodic mesoporous organosilica coating on flexible polyimide substrate with strong abrasion-resistance

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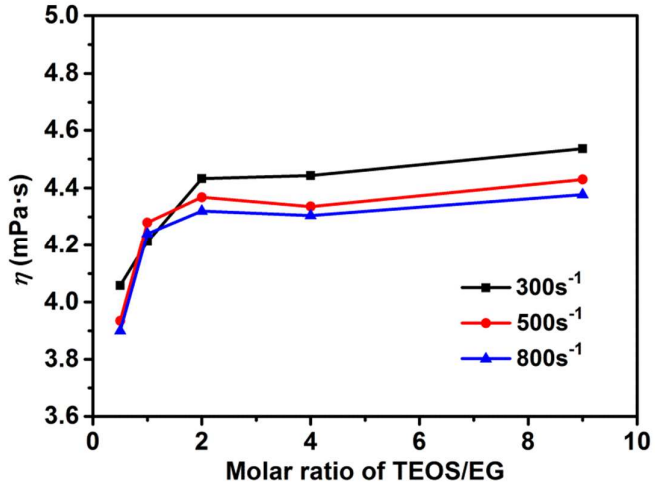

Figure S1. Viscosity of TEG sols with different molar ratio of TEOS/EG, obtained a shear rate of $300s^{-1}$, $500s^{-1}$ and $800s^{-1}$.

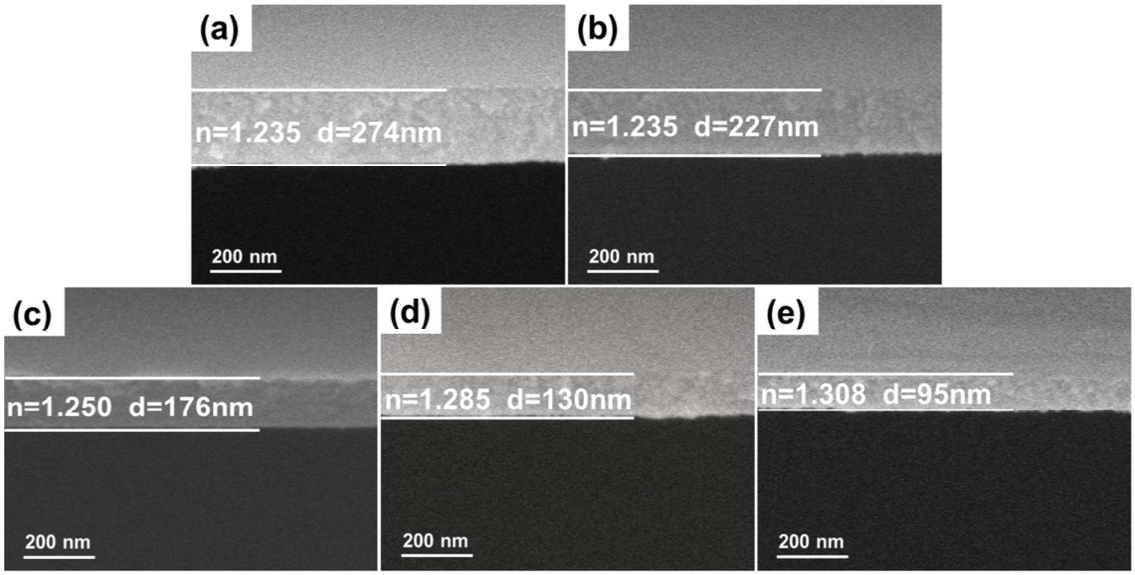

Figure S2. Cross-sectional SEM images of (a) TEG9-F, (b) TEG4-F, (c) TEG2-F, (d) TEG1-F, (e) TEG0.5-F.

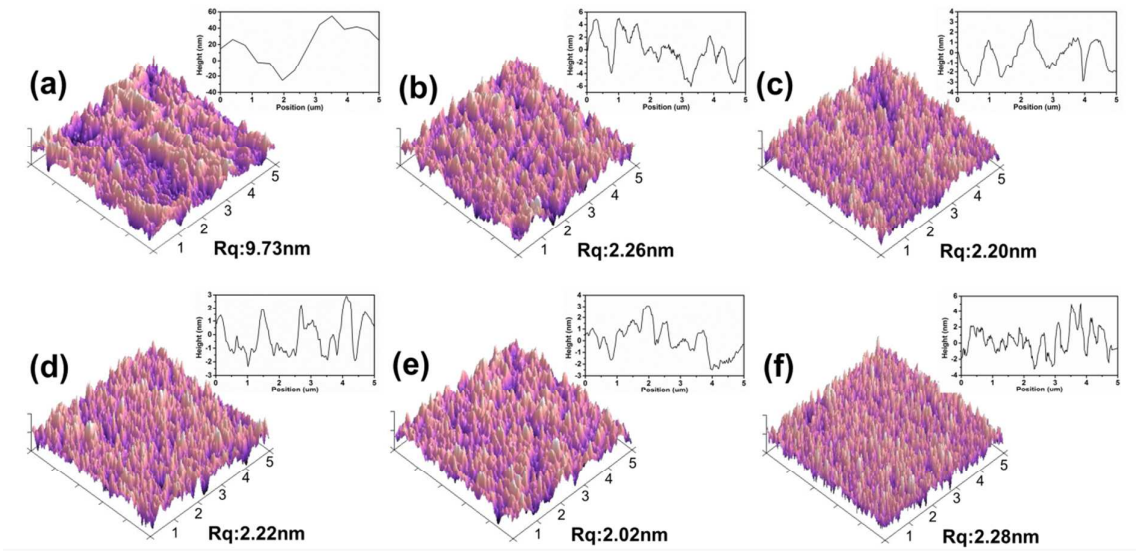

Figure S3. AFM images of (a) blank polyimide substrate and PMO coatings (b) TEG9-F, (c) TEG4-F, (d) TEG2-F, (e) TEG1-F, (f) TEG0.5-F. The insets are corresponding height profiles of blank polyimide substrate and PMO coatings.

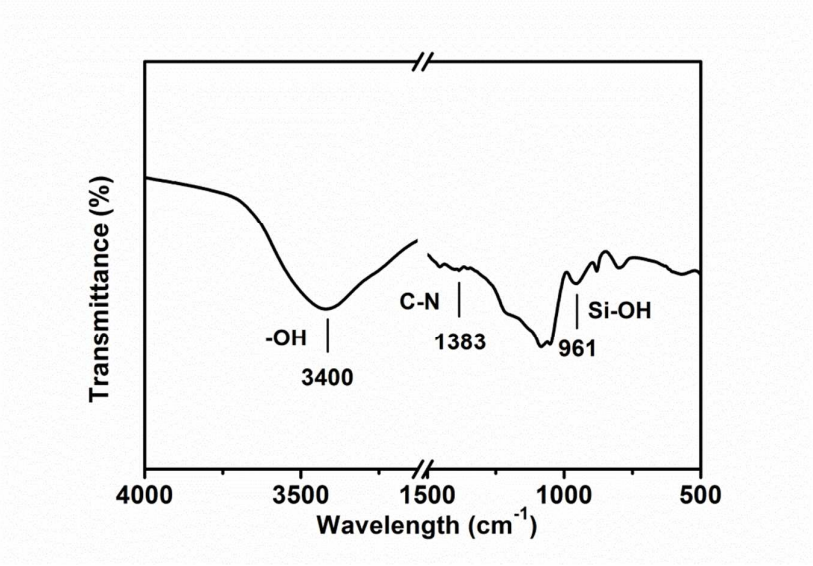

Figure S4. Vacuum IR spectrum of TEG2 xerogel.

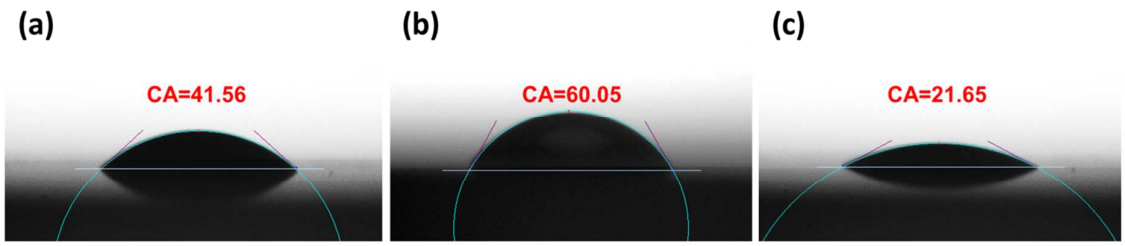

Figure S5. Water contact angles of (a) A-silica coating without F127, (b) EG-BSQ coating without TEOS, and (c) mesoporous silica coating without EG-BSQ.

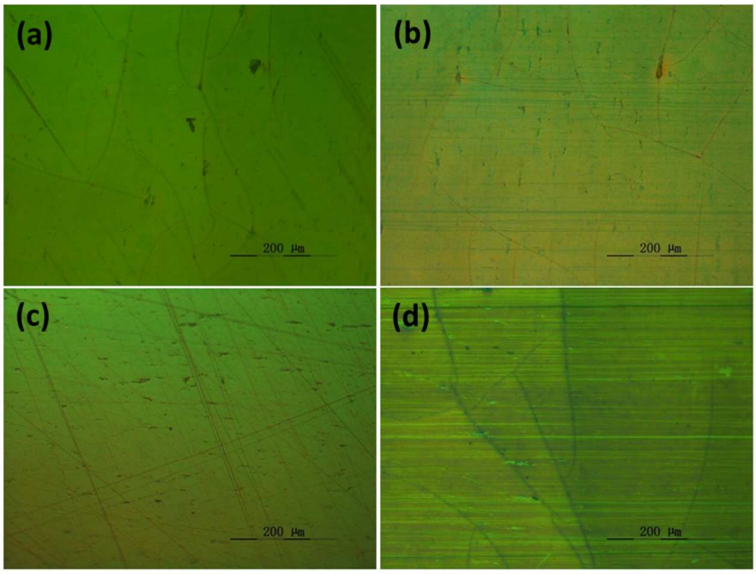

Figure S6. Optical microphotographs of TEG2-F on polyimide before (a) and after (b) abrasion, and blank polyimide before (c) and after (d) abrasion. Abrasion condition: 25 cycles with speed of 15 cycles per minute.