Supporting Information

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High-Strain Sensors Based on ZnO Nanowire/Polystyrene Hybridized Flexible Films

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**Figure S1** Optical images of the (a) as prepared PS nanowire network and (b) stretched PS nanowire network on PDMS substrate.
Figure S2 XRD of the ZnO NWs/PSNFs hybrid structure.
Figure S3 SEM image of the ZnO NWs/PSNFs hybrid structure on PDMS substrate a) before, c) during and d) after bending. Inset of shows the high-magnification SEM image of the rectangular-enclosed area in part c. (b) CCD image of the ZnO NWs/PSNFs hybrid structure on PDMS substrate during bending.
**Figure S4** Transmittance curve of pure PDMS and ZnO NWs/PSNFs hybrid structure on PDMS. Inset shows the optical image of the ZnO NWs/PSNFs hybrid structure on “HUST” logo.
Figure S5 Photographs of device under (a) 0% and (b) ~ 50% strain.
Figure S6 Relative resistance change in resistance with strain of ZnO NWs/PSNFs hybrid structure (black curve), ZnO nanowire on PDMS (red curve) and ZnO film on PDMS (blue curve).
Figure S7 Photographs of the tile were (a) before, (b) during and (c) after being broken by a hammer. A strain sensor device was fixed on the tile. (d) Current response of the strain sensor device.
Figure S8 I-V curve of the series connected solar cells under 1.5 AM sun illumination. The inset is the photograph of series connected monolithic all-solid-state dye-sensitized solar cells.
Figure S9 I-V curves of the strain sensor device under different strain states.
Figure S10 Photograph of dynamic measurement system.