Supporting Information

Multifunctional wettability patterns prepared by laser processing on superhydrophobic TiO_2 nanostructured surfaces

*Huaqiong Li,[‡b] Yuekun Lai,[‡*a] Jianying Huang,[a] Yuxin Tang,[b] Lei Yang,[c] Zhong Chen,[b] Keqin Zhang,[a] Xincai Wang[d] and Lay Poh Tan[*b]*

[a]*National Engineering Laboratory of Modern Silk, College of Textile and Clothing Engineering, Soochow University, Suzhou 215123, PR China*

[b]*School of Materials Science and Engineering, Nanyang Technological University, 50 Nanyang Avenue, 639798 Singapore, Singapore.*

[c]*Institute of Orthopaedics and Department of Orthopaedic Surgery of First Affiliated Hospital, Soochow University, Suzhou 215006, P.R. China.*

[d]*Singapore Institute of Manufacturing Technology, 71 Nanyang Drive, 638075, Singapore.*

Email: yklai@suda.edu.cn; lptan@ntu.edu.sg

Supporting movie and figure captions:

Movie S1. Droplet transportation along the guiding track constructed by taking advantage of wettability micropattern with extremely high adhesion contrast.

Figure S1. Experimental set-up of the fs-laser irradiation facility with the scanning unit of the sample holders (scanner and xyz-stage).

Figure S2. SEM images of direct femtosecond laser induced micropatterns with various shapes and sizes on biodegradable polymer substrates.

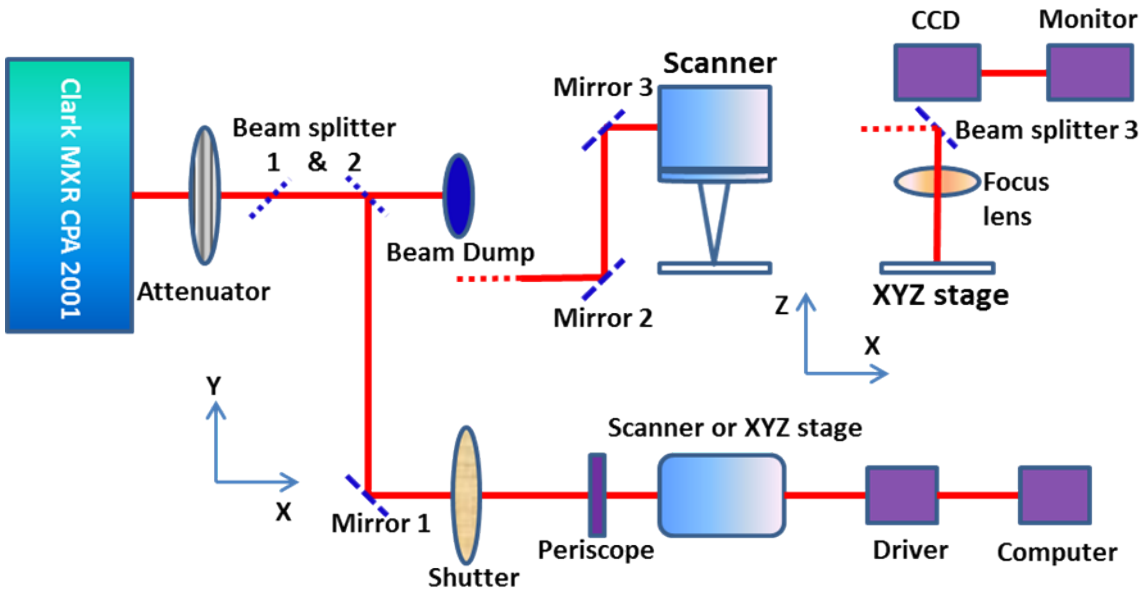

Figure S1. Experimental set-up of the fs-laser irradiation facility with the scanning unit of the sample holders (scanner and xyz-stage).

Direct femtosecond laser micropatterning offers distinct advantages for patterning compared to traditional photolithography techniques in terms of fast and simple process, large scale production and ease of operation. With one-step laser processing, the patterning can be applied to various materials with any shape. Here shows some examples that illustrated different kinds of micro-patterns (triangles, squares or circles), which were created by direct femtosecond laser machining on biodegradable polymer substrates.

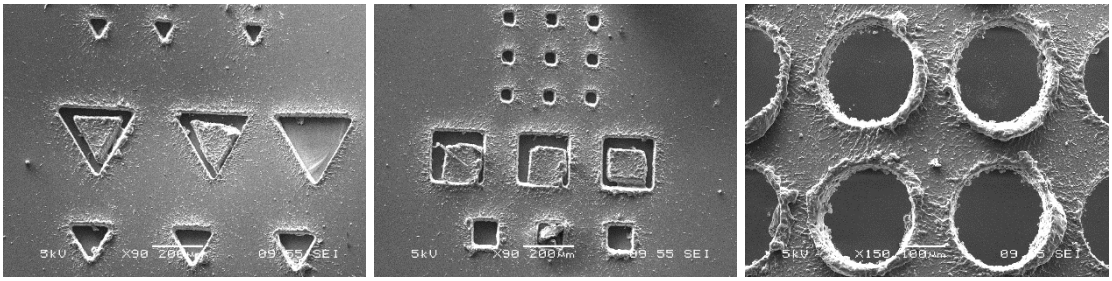

Figure S2. SEM images of direct femtosecond laser induced micropatterns with various shapes and sizes on biodegradable polymer substrates.