Supplementary Material (ESI) for Lab on a Chip

Electronic supplementary information

Non-fouling microfluidic chip produced by radio frequency tetraglyme plasma deposition

Malinda Salim, [a] Gautam Mishra, [b] Gregory J.S. Fowler, [b] Brian O'Sullivan, [a] Phillip C. Wright, [a] and Sally L. McArthur*[b]

[a] *Department of Chemical and Process Engineering, University of Sheffield, Mappin Street, Sheffield S1 3JD, UK.. Fax: +44 (0)114 222 7501; Tel: +44 (0)114 222 7577; E-mail: p.c.wright@sheffield.ac.uk*
[b] *Department of Engineering Materials, The Kroto Research Institute, North Campus, The University of Sheffield, Broad Lane, Sheffield, S3 7HQ,.UK. Fax: +44 (0) 114 222 5943; Tel: +44 (0) 114 222 5513; E-mail: s.l.mcarthur@sheffield.ac.uk*

Plasma reactor description

The plasma reactor comprised of an RF power source (13.56 MHz Coaxial Power Supplies Ltd., Eastbourne, UK) connected via a manual impedance matching unit to an internal electrode fitted into a stainless steel 15.2 litres T-piece reactor. The reactor was sealed with stainless steel end flanges using Viton gaskets. The power from the RF generator was fed to the circular disk shaped electrode via electrical feedthrough, while the rest of the stainless chamber was grounded.

XPS analysis description

A takeoff angle of 0° relative to the sample normal was used for all measurements. The chemical composition of the channel surfaces were quantified from survey (1200-0 eV) and N 1s spectra collected at 160eV pass energies using the relative sensitivity values supplied with the instrument. High resolution C1s core level spectra were collected at 20eV pass energy for curve fitting.

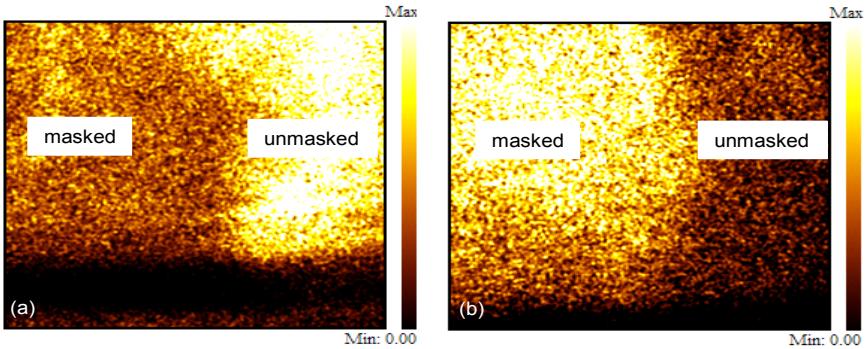

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Fig. S1. XPS chemical state images showing (a) C-O peak intensity and (b) N1s core level peak intensity of the masked and unmasked region of the microchannel after contact with 50 μg ml^{-1} fibrinogen in PBS for 120 minutes under static conditions.