Experimental Details.

The composition of the PFS-PDMS block copolymer was established by ^{1}H NMR and the molecular weight was estimated to be 35 100 g mol^{-1} (PDI = 1.10) by Gel Permeation Chromatography versus polystyrene standards.

A photoresist from Allresist (ARP 639.08, Strausberg, Germany) was spincoated on a cleaned Si-wafer with its native oxide to yield a resist film thickness of 200 nm. Patterns were then written using a 20 keV electron beam on a JEOL 6320 scanning electron microscope (SEM) controlled with Elphy Quantum software. The width of the lines written with the electron beam could be varied between 90 to 600 nm and the e-beam exposed resist was then developed using a solution of methylisobutylketone and ispropanol in a ratio of 1:3 for one minute, stopped in isopropanol for 30 seconds then dried with nitrogen. The Si substrate with the structured resist film was either dipped into an *n*-hexane solution of PFS_{50}-*b*-$PDMS_{300}$ cylinders (ca. 10^{-5} g ml^{-1}) and withdrawn from the solution at a speed of 5 mm/min or spin coated at 2500 rpm. Qualitatively similar results were obtained with cylindrical micelles of PI-PFS (PI = polyisoprene).

SFM measurements were performed on a Nanoscope III (Digital Instruments, Santa Barbara) operating in tapping mode. The oscillation frequency was set between 320 – 360 kHz depending on the Si cantilever.

XPS was used to determine the relative elemental surface composition of the block copolymer micelles (Fe – 0.72, O – 19.4, C – 59.6, Si – 20.2%) and the ceramic after RIE on GaAs and confirmed the presence of Fe, Si, O, and C (Fe – 3.4, O – 43.6, C – 34.2, Si – 18.9%). Details of the XPS instrumentation have been published elsewhere (see "Layer-by-Layer Assembly of Electrostatic Organometallic Superlattices using Polyferrocenylsilanes" Ginzburg, M.; Galloro, J.; Jaekle, F.; Power-Billard, K.N.; Yang, S.; Sokolov, I.; Lam, C.; Neumann, A.W.; Manners, I. ; Ozin, G.A. *Langmuir* **2000**, *16*, 9609).

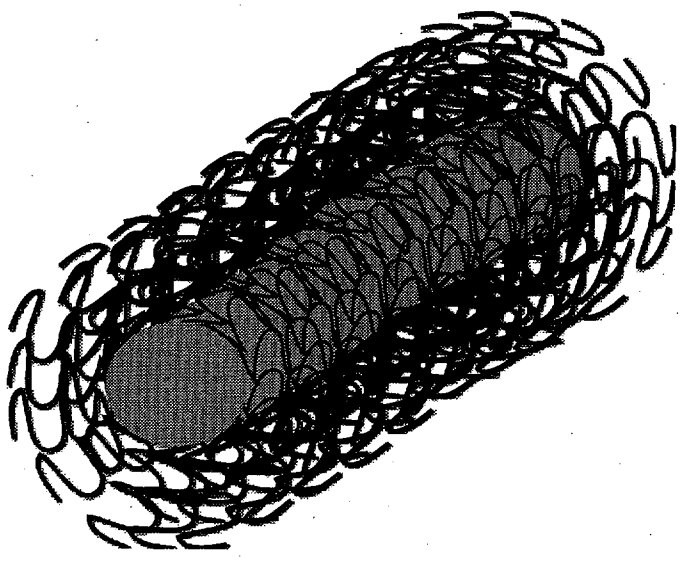


Figure S1. Schematic diagram illustrating the morphology of the cylindrical micelles that result on dissolution of PFS_{50}-*b*-$PDMS_{300}$ in hexanes. PFS forms the core and PDMS the corona.

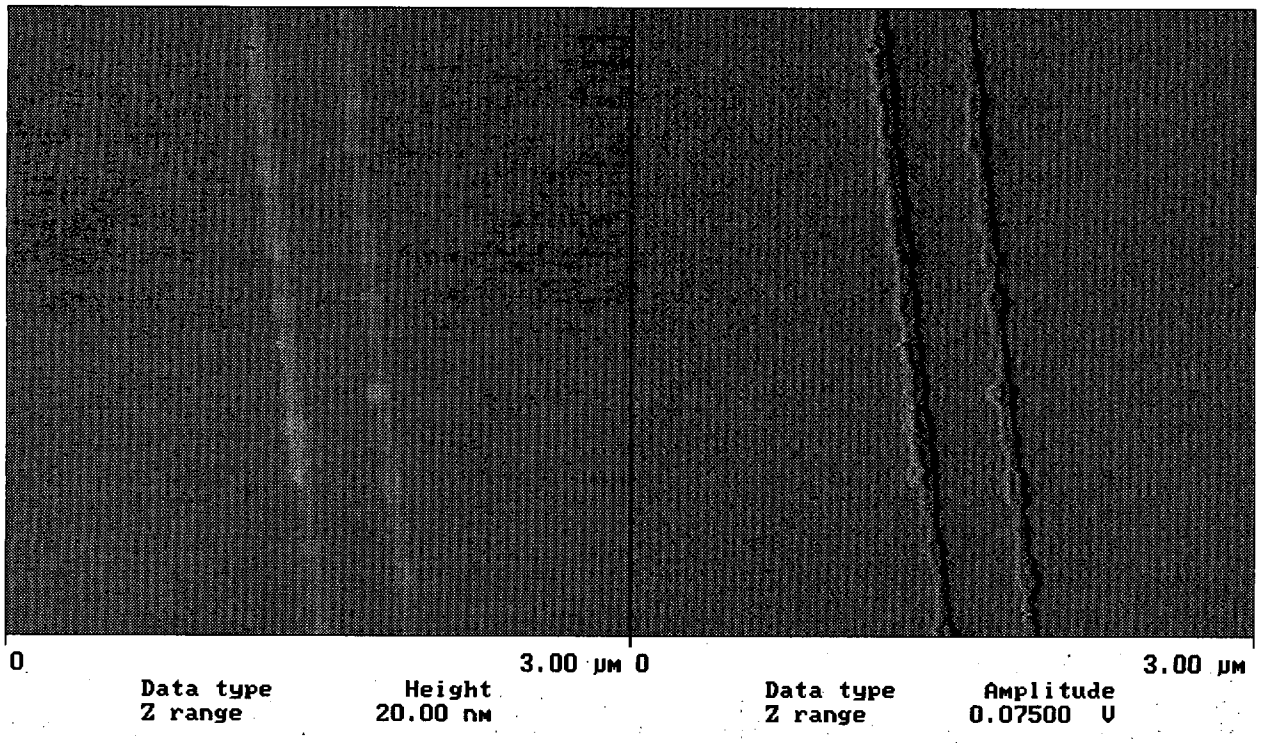
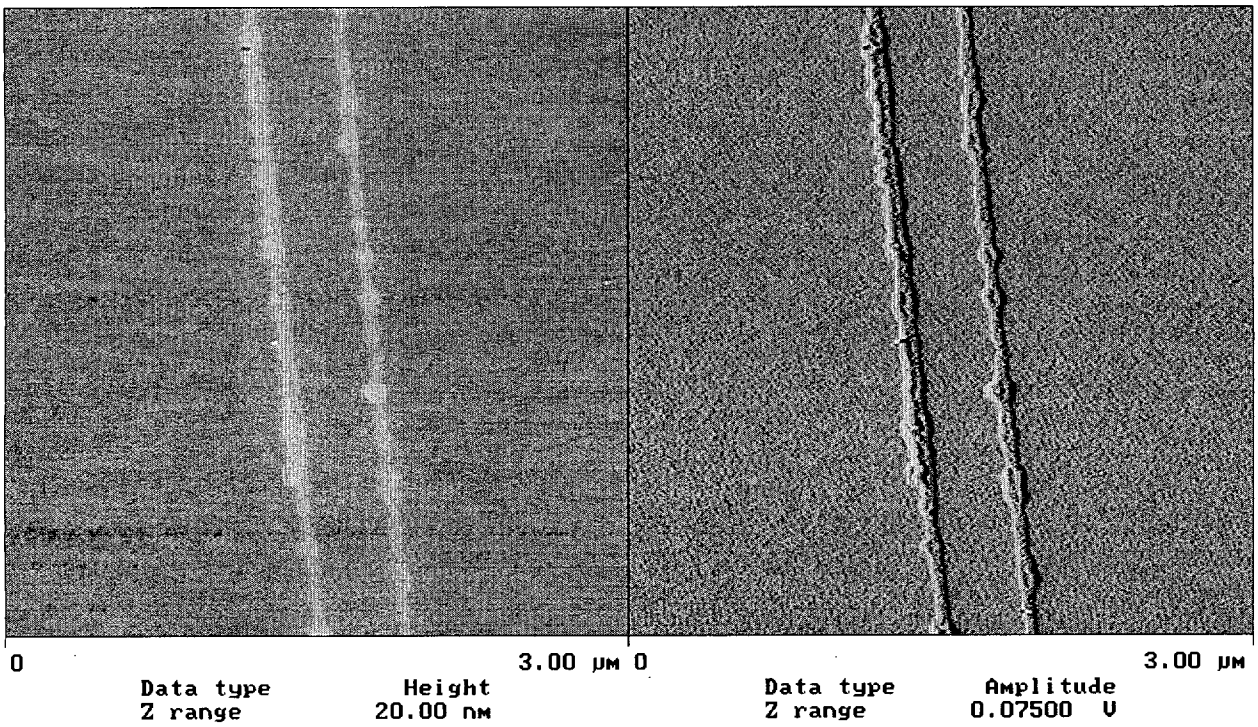


Figure S2 Scanning Force micrograph of more than one line after the oriented deposition of PFS-*b*-PDMS diblock copolymer cylinders along pre-patterned grooves on a resist film, lift-off with acetone followed by hydrogen plasma treatment. In this case a micelle solution of a higher concentration was used in comparison to that for Figure 2.



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