Electronic supplementary materials *Mendeleev Commun.*, 2019, **29**, 307–308

Synthesis of new cross-linked copolymer from bisphenol A–aniline based benzoxazine and *meta*-linked fluorinated poly(arylene ether)

Yaroslav L. Kobzar, Ihor M. Tkachenko and Valery V. Shevchenko

Experimental

Bisphenol A–aniline based benzoxazine was synthesized from bisphenol A, aniline and paraformaldehyde according to the reported procedure.[1] FPAE (M_w/M_n 4.0, M_n 45 000 g mol^{-1}) was prepared according to the reported procedure.[2] All reagents and solvents were purified by well-established techniques.

Fourier transform infrared (FTIR) spectra of the thin films were recorded using a Bruker TENSOR 37 spectrometer (USA) in the absorption region of 600–4000 cm^{-1}. Differential scanning calorimetry (DSC) was performed using a TA Instruments Q-2000 DSC apparatus (USA) at a heating rate of 20 K min^{-1}. The gel fraction of the sample was calculated from the difference in its weight before and after extraction with toluene at 110.6 °C for 48 h. The morphology of the prepared films was investigated using scanning electron microscopy (SEM). SEM images were taken on a Tescan MIRA 3 microscope (Czech Republic) operated at 10 kV electron beam energy. The samples for SEM analysis were preliminary covered by a thin layer (~3 nm) of platinum deposited by magnetron sputtering *in vacuo*.

Figure S1 Free-standing cured film.

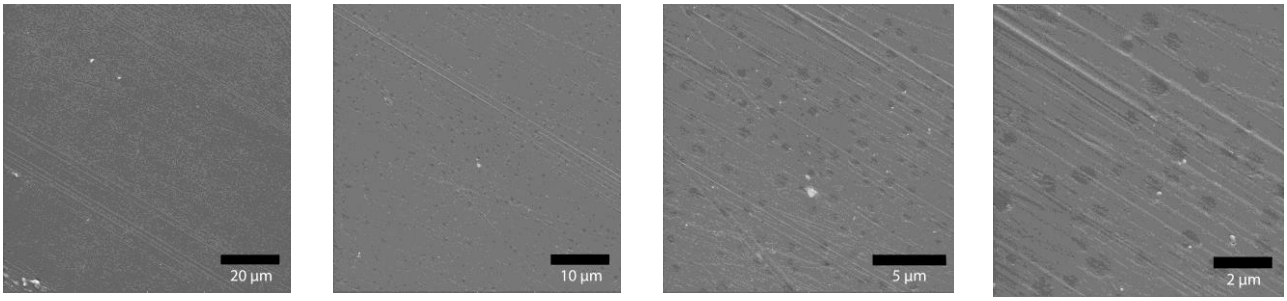

Figure S2 SEM images of the film.

References

1 D. L. Jayamohan Das, R. Rajeev, R. S. Rajeev and K. S. Santhosh kumar, *Int. J. Sci. Technol. Res.*, 2013, **2** (10), 146.

2 I. M. Tkachenko, N. A. Belov, Yu. V. Yakovlev, P. V. Vakuliuk, O. V. Shekera, Y. P. Yampolskii and V. V. Shevchenko, *Mater. Chem. Phys.*, 2016, **183**, 279.