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Supporting information for article:

Optical and structural characteristics of PMMA films doped with a new anisometric Eu(III) complex

Andrey Knyazev, Aleksandr Krupin, Aidar Gubaidullin and Yury Galyametdinov

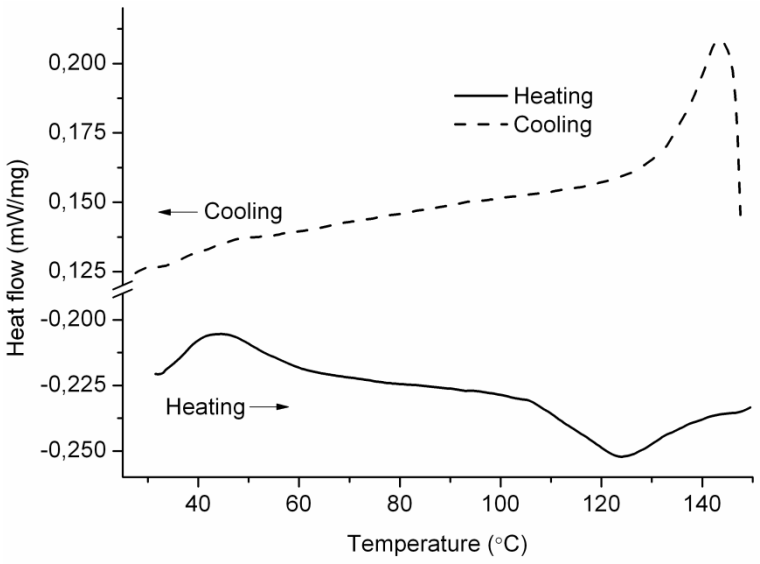


Figure S1 DSC thermograms of Eu(CPDK$_{3–5}$)$_3$phen complex.

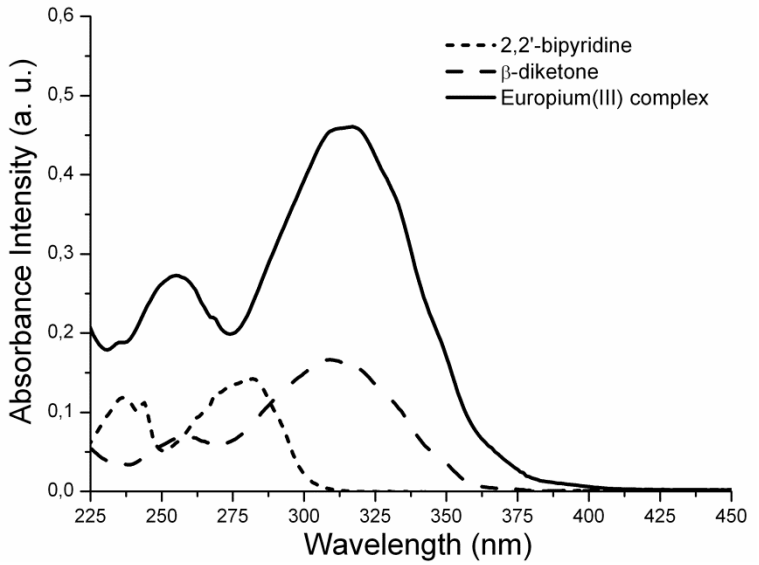


Figure S2 Absorption spectra of Eu(III) complexes and ligands solutions in hexane.

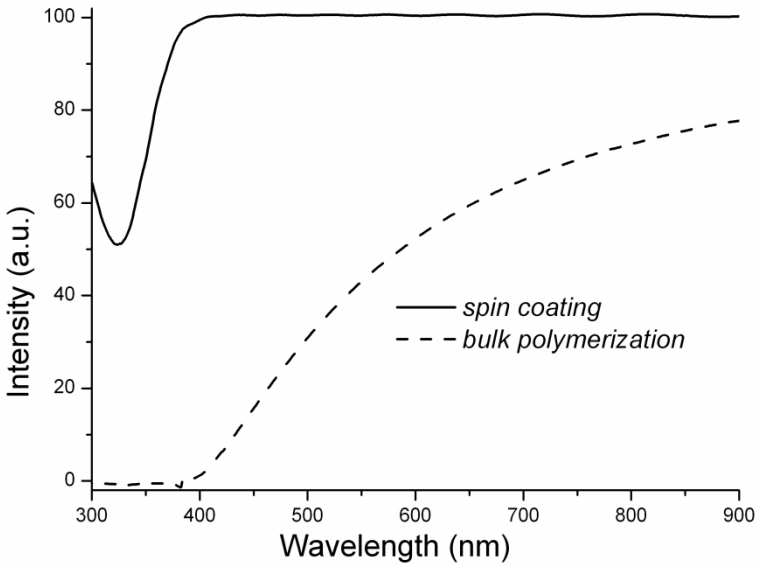


Figure S3 Transmission of light by the 1 wt.% Eu(III) complex film in PMMA, prepared by bulk polymerization and spin-coating.

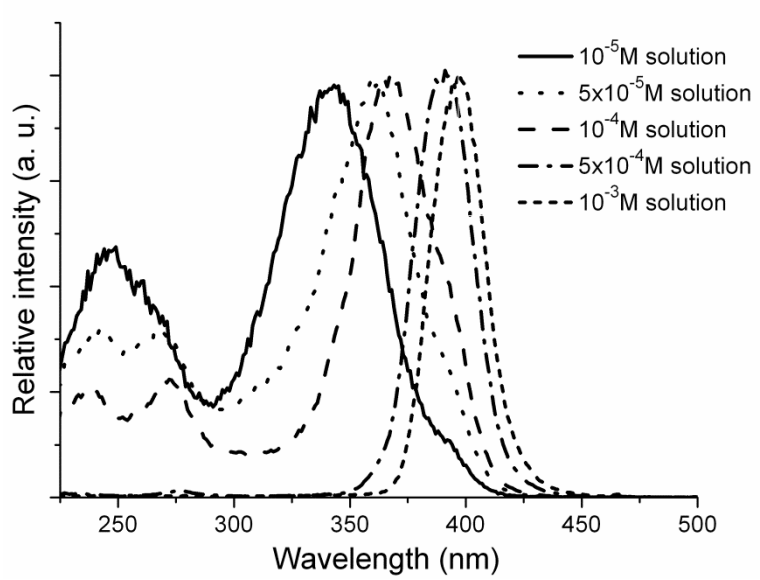


Figure S4 Excitation spectra of the europium(III) complex solutions in different concentrations in hexane at λ_{em}= 613 nm

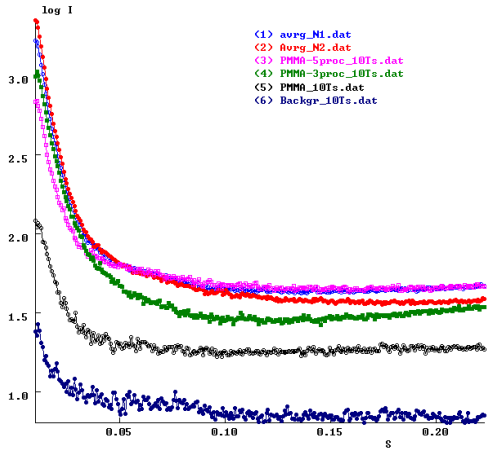
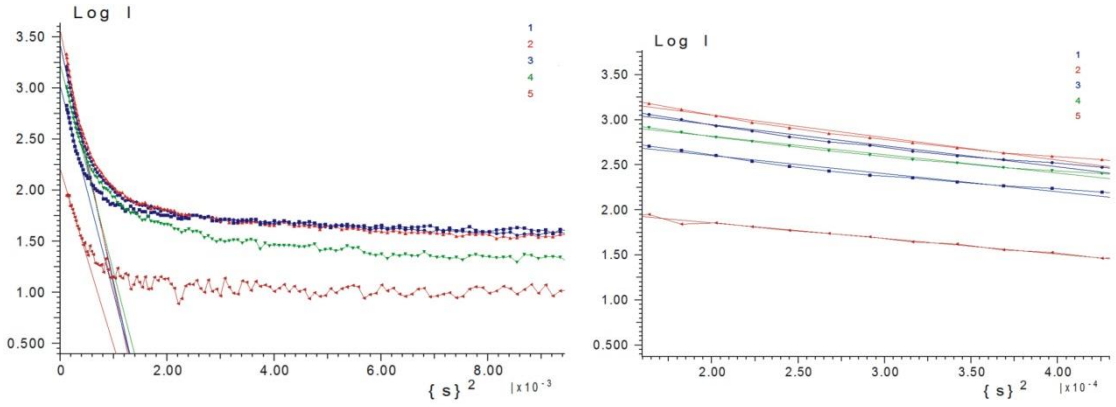
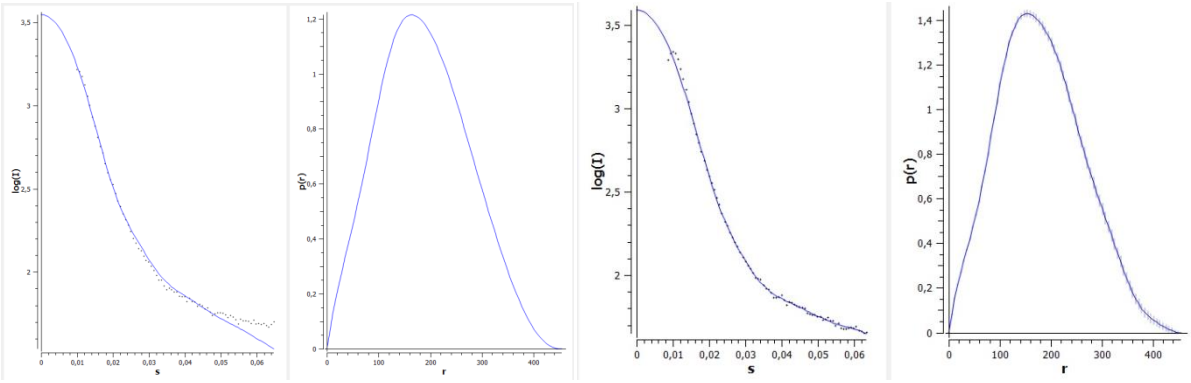


Figure S5 SAXS diffraction intensity profiles at 23 °C in logarithmic scale of the samples investigated. Scattering vectors =4πSinθ/λ, λ is the wavelength of the incident X-ray beam. The color markings of the curves are shown in the inset. (light blue - PMMA with 15% complex, prepared by bulk polymerization; red - PMMA with 15% complex, prepared by spin-coating; purple - PMMA 5%; green - PMMA 3% complex, prepared by bulk polymerization; black - pure PMMA; dark-blue – background scattering.



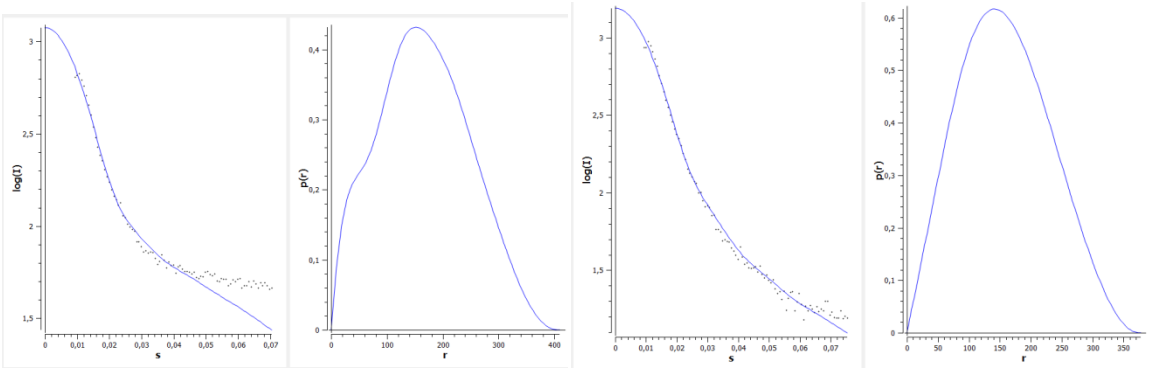
a b

Figure S6 (a) SAXS data plot ***ln(I)*** versus s^2 for samples with linear approximation of the curve. Scattering vectors =4πSinθ/λ, λ is the wavelength of the incident X-ray beam; (b) enlarged fragments of the curves with linear approximations. The color markings of the curves are shown in the inset: (1) - PMMA with 15% complex, prepared by bulk polymerization; (2) - PMMA with 15% complex, prepared by spin-coating; (3) - PMMA 5%; (4) - PMMA 3% complex, prepared by bulk polymerization; (5) - pure PMMA.



a b

Figure S7 The fitting of experimental SAXS curves (points – experimental data, curves – simulation) and calculated distance distribution functions p(r) for (a) sample PMMA with 15% complex, prepared by bulk polymerization and (b) PMMA with 15% complex, prepared by spin-coating.



a b

Figure S8 The fitting of experimental SAXS curves (points – experimental data, curves – simulation) and calculated distance distribution functions p(r) for (a) sample 5% and (b) sample 3% complexes, prepared by bulk polymerization.