

Supplementary Materials

Dye-Doped Polymeric Microplastics: Light Tools for Bioimaging in Test Organisms

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Table S1. Experimental conditions and SEM image of polymeric particles obtained by OBM, using polymer dissolved in solvent (acetone or DMF), put 7 mL in dialysis membrane and immersed in 200 mL of distilled water for 5 days, at room temperature (25°C).

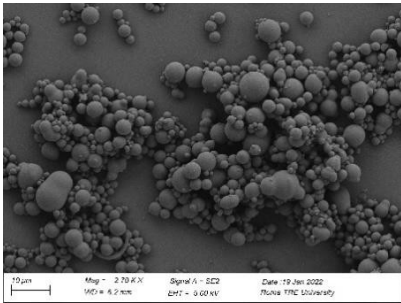
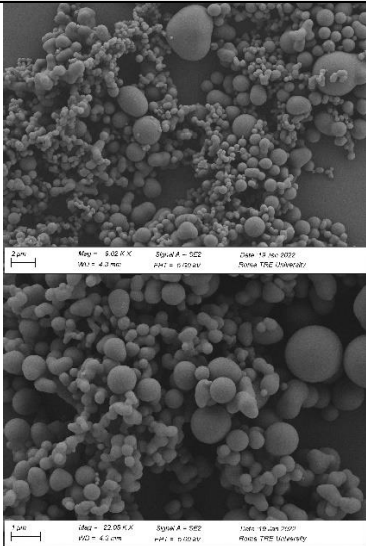
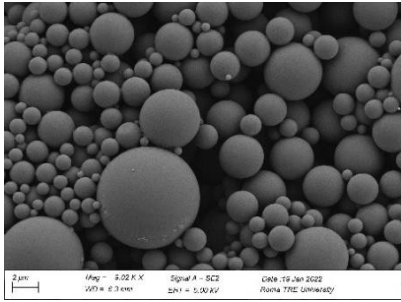
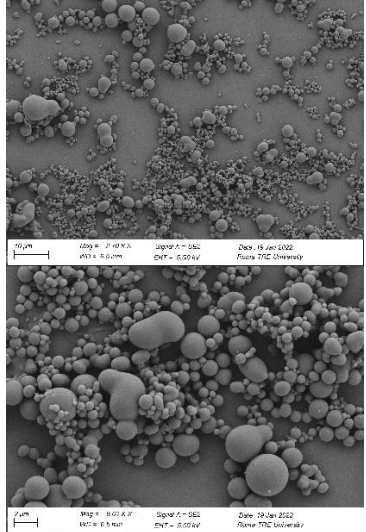
P(S-co-MMA) (g)	acetone (10 mL)	DMF (10 mL)
0.0530		
0.3015		

Table S2. Experimental conditions and SEM image of polymeric particles obtained by OBM, using different amount of polymer dissolved with different amount of dye (RITC or FITC) in different volume of acetone, put in dialysis membrane and immersed in 200 mL of distilled water for 5 days, at room temperature (25°C).

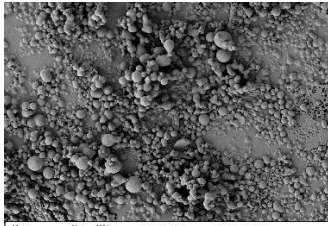
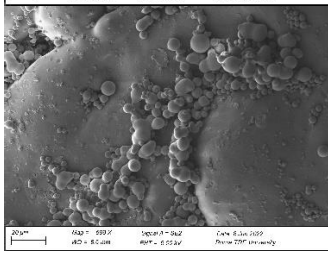
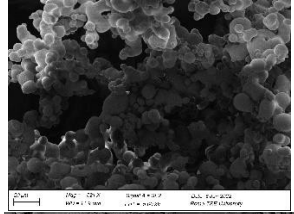
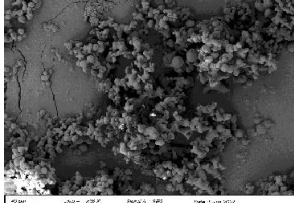
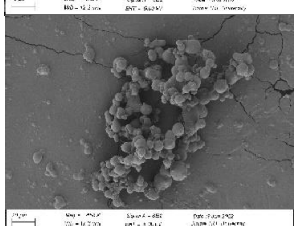
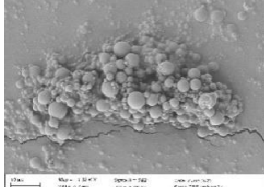
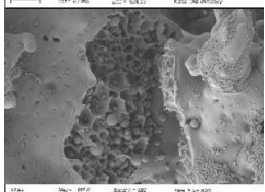
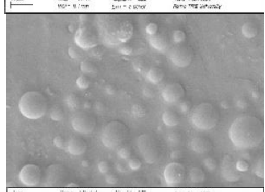
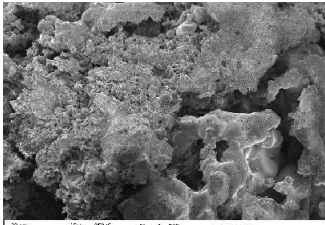
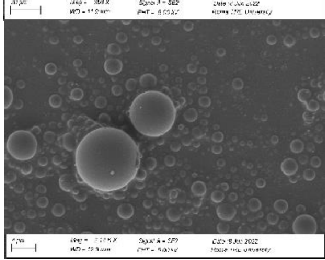
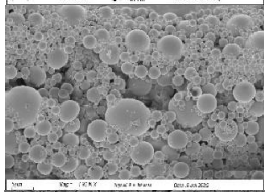
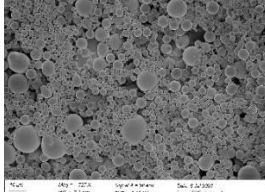
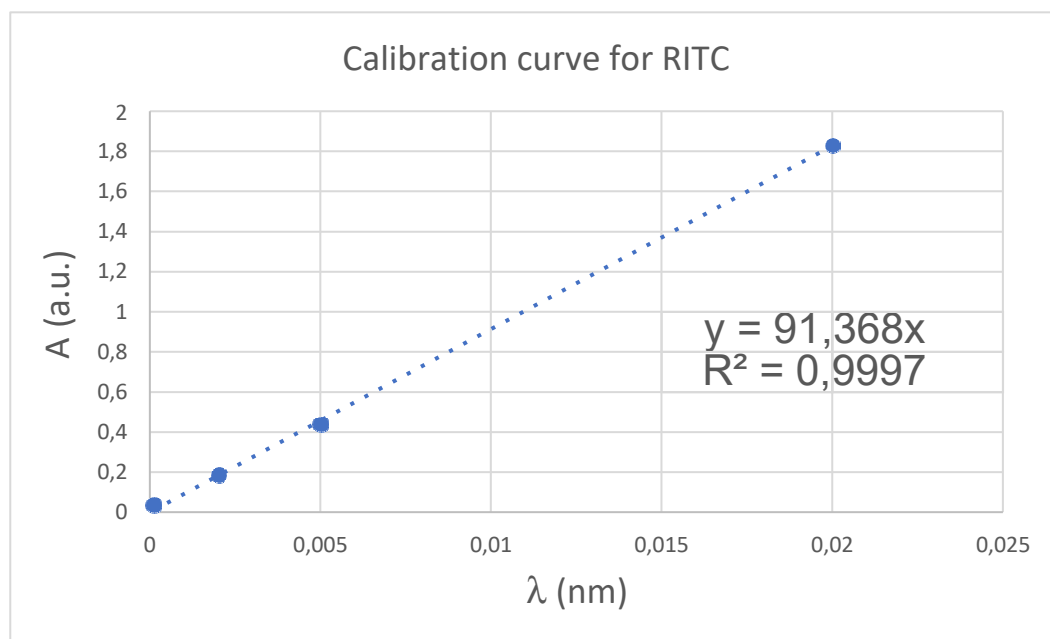
P(S-co-MMA) (g)	Acetone (mL)	RITC		FITC	
0.300	10	0.003 g	 	0.003mg	  
		0.030 g	  	0.030 g	 
3.000 g	100	0.003mg	 	-	-

Table S3. Spectra were collected at C1s, N1s, S2p and O1s core levels (all BE (eV), FWHM (eV), atomic percentages and proposed signals assignments are here reported.

SAMPLE	SIGNAL	BE (eV)	FWHM (eV)	Atomic % (exp)	ASSIGNMENT
RITC + microplastics	C1s	285	1.8	37%	C-C, C=C
		286.5	1.8	13%	CN, NCS
		288.1	1.8	25%	C-O, C=O
		289.8	1.8	17%	COOH
	N1s	398.4	1.7	7%	NCS
		399.9	1.7	75%	amine
		401.1	1.7	18%	N ⁺
	S2p 3/2	161.4	2.6	56%	NCS
		164.2	2.6	15%	SS, SH
		168.6	2.6	29%	oxidized S
FITC + microplastics	C1s	285.0	1.8	38%	C-C
		286.6	1.8	13%	CN, NCS
		287.7	1.8	26%	C-O, C=O
		289.0	1.8	14%	COOH
	N1s	398.8	1.8	7%	NCS
		400.3	1.8	74%	amine
		401.6	1.8	19%	N ⁺
	S2p _{3/2}	160.8	3.0	13%	NCS
		164.0	3.0	57%	SH, S-S
		168.9	3.0	22%	oxidized S
		172.2	3.0	8%	oxidized S

Figure S1. Calibration curves for RITC (a) and FITC (b).

(a)



(b)

