

Materials List for:

# Fabrication of Polymer Microspheres for Optical Resonator and Laser Applications

Yohei Yamamoto<sup>1,2,3</sup>, Daichi Okada<sup>1</sup>, Soh Kushida<sup>1</sup>, Zakarias Seba Ngara<sup>1</sup>, Osamu Oki<sup>1</sup>

<sup>1</sup>Faculty of Pure and Applied Sciences, University of Tsukuba

<sup>2</sup>Tsukuba Research Center for Interdisciplinary Materials Science (TIMS), University of Tsukuba

<sup>3</sup>Center for Integrated Research in Fundamental Science and Technology (CiRfSE), University of Tsukuba

Correspondence to: Yohei Yamamoto at [yamamoto@ims.tsukuba.ac.jp](mailto:yamamoto@ims.tsukuba.ac.jp)

URL: <https://www.jove.com/video/55934>

DOI: [doi:10.3791/55934](https://doi.org/10.3791/55934)

## Materials

Name	Company	Catalog Number	Comments
polystyrene	Aldrich	132427-25G	
sodium dodecylsulfate	Kanto Kagaku	372035-31	
tetrahydrofuran	Wako	206-08744	
chloroform	Wako	038-18495	
methanol	Wako	139-13995	
Poly(9,9-di-n-octylfluorenyl-2,7-diyl)	Aldrich	571652-500MG	
Poly[2-methoxy-5-(3',7'-dimethyloctyloxy)-1,4-phenylenevinylene] (MDMOPPV)	Aldrich	546461-1G	
poly[(9,9-dioctylfluorene-2,7-diyl)-alt-(5-octylthieno[3,4-c]pyrrole-4,6-dione-1,3-diyl)] (P1)	synthesized	-	reference 28
poly[(N-(2-heptylundecyl)carbazole-2,7-diyl)-alt-(4,8-bis[(dodecyl)carbonyl]benzo[1,2-b:4,5-b']dithiophene-2,6-diyl)] (P2)	synthesized	-	reference 28
fluorescent dye (boron dipyrin; BODIPY)	synthesized	-	reference 32
Optical Microscope	Nicon	Eclipse LV-N	
laser_405 nm	Hutech	DH405-10-5	
Spectrometer	Lambda Vision	LV-MC3/T	
Homogenizer	Microtech Nichion	Phycotron NS-360D	
micromanipulation	Microsupport	Quick Pro QP-3RH	