

Materials List for:

Preparation of Monodomain Liquid Crystal Elastomers and Liquid Crystal Elastomer Nanocomposites

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Materials

Name	Company	Catalog Number	Comments
4-methoxyphenyl 4-(3-butenyloxy)benzoate	TCI America	M2106	Reactive mesogen
poly(methylhydrosiloxane)	Gelest	HMS-993	Reactive polysiloxane
1,4-di(10-undecenyl)benzene	N/A	N/A	see: Ali, S. A., Al-Muallem, H. A., Rahman, S. U. & Saeed, M. T. Bis-isoxazolidines: A new class of corrosion inhibitors of mild steel in acidic media. <i>Corrosion Science</i> . 50 (11), 3070–3077, doi:10.1016/j.corsci.2008.08.011 (2008)
(dichloro(1,5-cyclooctadiene)-platinum(II))	Sigma Aldrich	244937	Pt catalyst
PTFE mold	N/A	N/A	fabricated at Rice machine shop
carbon black nanoparticles	Cabot	VULCAN® XC72R	used in the synthesis of LCE nanocomposites
polystyrene	Sigma Aldrich	331651	linear polystyrene
4,4'-diglycidyl ether	N/A	N/A	see: Giamberjini, M., Amendola, E. & Carfagna, C. Liquid Crystalline Epoxy Thermosets. <i>Molecular Crystals and Liquid Crystals Science and Technology. Section A. Molecular Crystals and Liquid Crystals</i> . 266 (1), 9–22, doi:10.1080/10587259508033628 (1995).
sebacic acid	Sigma Aldrich	283258	C8 linking group for epoxy-LCE synthesis
hexadecanedioic acid	Sigma Aldrich	177504	C16 linking group for epoxy-LCE synthesis
carboxydecyl-terminated polydimethylsiloxane	Gelest	DMS-B12	Siloxane linking group for epoxy-LCE synthesis
1,5,7-triazabicyclo[4.4.0] dec-5-ene	Sigma Aldrich	345571	catalyst for reversible LCEs
carbon rods	Ladd Research	30250	used in cell culture experiments
medical grade silicone adhesive	Silbione	MED ADH 4100 RTV	used to adhere carbon rods to vessel