

David J. McGee- Publications

*Indicates undergraduate student co-author

27. O. Senel, B. Gruppuso*, C. Pedersen*, Z. Farzan*, J. Strobelt, and D.J. McGee, “*Continuous laser printing of surface relief gratings on azopolymer films*,” Optics Express, **32**(26), 47385, (2024).

26. J. Strobelt, M. Van Soelen*, H. Abourahma, and D. J. McGee, “*Supramolecular azopolymers for dynamic surface microstructures using digital polarization optics*”, Advanced Optical Materials, **11**(8), 2202245, (2023).

25. J. Strobelt, D. Stolz, M. Leven, M. Van Soelen*, L. Kurlandski*, H. Abourahma, and D. J. McGee, “*Optical microstructure fabrication using structured polarized illumination*“, Optics Express, **30**(5), 7308, (2022).

24. J. Krüger, N. Bolle* , T. Calvelo*, S. Bergmann, H. Abourahma, and D. J. McGee, “*Optical reconfiguration of surface relief gratings on supramolecular polymer films using grating translation and superposition*”, Journal of Applied Physics, **125**, 243108 (2019).

23. D.J. McGee, J. Ferrie*, A. Plachy, Y. Joo, J. Choi, C. Kanimozhi, and P. Gopalan, “*Photo-induced refractive index and topographical surface gratings in functionalized nanocarbon solid film*”, Applied Physics Letters, **107**, 181102 (2015).

22. D. J. McGee, C. Huang, M. Kim, J. W. Choi, M. A. Eriksson, and P. Gopalan, “*Molecular orientation and photoswitching kinetics on single-walled carbon nanotubes by optical second harmonic generation*”, Applied Physics Letters, **101**, 264101 (2012).

21. C. Huang, R K. Wang, B. M. Wong, D. J. McGee, F. Léonard, Y. Kim, K. F. Johnson, M. S. Arnold, M. A. Eriksson, and P. Gopalan, “*Spectroscopic properties of nanotube-chromophore hybrids*”, ACS Nano, **5**, 7767 (2011).

20. M. Leolukman, P. Paoprasert, I. Mandel, S.J. Diaz*, D.J. McGee, and P. Gopalan, “*Linear-dendritic block copolymer hosts for the encapsulation of electro-optic chromophores via H-bonding*”, Journal of Polymer Science: Part A: Polymer Chemistry, **47**, 5017, (2009).

19. J. Sun, O. Wilson, M. Reese, B.J. Jung, T. Dawidcyk, M. Yeh, B.M. Dhar, B.N. Pal, P. Trottman, I. McCue, L. Berger, G.R. Blum, E. Heinemann, D.J. McGee, J.D. Erlebacher, and H.E. Katz, “*Hands-on preparation and testing of solution-processed semiconductor devices in the undergraduate classroom*”, Journal of Materials Education, **31**, 271, (2009).

18. M. Leolukman, P. Paoprasert, Y. Wang, V.Makhija*, D. J. McGee, and P. Gopalan, “*Influence of architecture, concentration, and thermal history, on the poling of nonlinear optical chromophores in block copolymer domains*”, Macromolecules, **41** (13), 46514660, (2008).

17. V. Campbell, P. Paoprasert, J. Mykiety*, I. In, D.J. McGee, and P. Gopalan, “*Linear and branched fluoroazo-benzene chromophores with increased compatibility in semifluorinated polymers*”, Journal of Polymer Science Part A: Polymer Chemistry, **45**, 3166, (2007).
16. V. Campbell, I. In, D.J. McGee, N. Woodward*, A. Caruso*, and P. Gopalan, “*Chromophore orientation, phase stability, and photorefractive effects in branched azobenzene chromophores*”, Macromolecules, **39**, 957, (2006).
15. D.J. McGee, J. Fukunaga, T. Zielinski*, M. Yang*, and C. Salter, “*Chromophore orientational mobility and index grating risetime in azo-dye doped photorefractive polymer composites*” Journal of Applied Physics, **97**, 103102, (2005).
14. D. Kim, H. Du, G. Kowach, C. White, and D. J. McGee, “*Fabrication and optical characterization of Germanium-doped silica ridge waveguides using a novel colloidal suspension approach*”, Applied Physics Letters, **87**, 121114, (2005).
13. P. Gopalan, H.E. Katz, D.J. McGee, C. Erben, T. Zielinski*, D. Bousquet*, D. Muller, J. Grazul, and Y. Ollson, “*Star-shaped azo based dipolar chromophores: design, synthesis, matrix compatibility, and electro-optic activity*”, Journal of the American Chemical Society, **126**, 1741-1747, (2004).
12. D.J. McGee, “*Undergraduate research at Drew University*”, Council on Undergraduate Research Quarterly, 118-120, March 2003.
11. M. Lee, H. E. Katz, C. Erben, D. M. Gill, P. Gopalan, J. D. Heber, and D. J. McGee, “*Broadband modulation of light using an electro-optic polymer*”, Science, **298**, 1401, (2002).
10. T. H. Stievater, W. S. Rabinovich, H. S. Newman, R. Mahon, P. G. Goetz, J. L. Ebel, and D. J. McGee, “*Measurement of thermal-mechanical noise in microelectromechanical systems*”, Applied Physics Letters, **81**, 1779-1781, (2002).
9. C. Wood*, G.J. Salamo, J. Goff, G.L. Wood, R.J. Anderson, and D.J. McGee, “*Fixed three-dimensional holographic images*”, Applied Optics, **41**, 6796 (2002).
8. T. H. Stievater, W. S. Rabinovich, H. S. Newman, R. Mahon, D. J. McGee, and P. G. Goetz, “*Microcavity interferometry for MEMS device characterization*”, Journal of Microelectromechanical Systems, **12**, 109-116 (2002).
7. D. J. McGee and M. Matlin, “*Photorefractive polymers: materials science, thin-film fabrication, and experiments in volume holography*”, American Journal of Physics, **69**, 10, 1055-1063, (2001).
6. M. R. Leahy* and D. J. McGee, “*Influence of pump beam diameter on beam fanning in a doped photorefractive polymer composite*”, Optics Communications, **187**, 277 (2001).

5. E. J. Smiley*, D. J. McGee, C. Salter, and C. R. Carlen*, “*Diffraction efficiency and phase stability of poly(N-vinylcarbazole)-based photorefractive polymer composites as a function of azo-dye concentration*”, Journal of Applied Physics, **88**, 4910-4912 (2000).
4. M. Matlin, D. J. McGee, Z. Chen, and N.B. Abraham, “*Pattern alternation and pattern erasure in a swept-cavity photorefractive oscillator*”, Journal of the European Optical Society B: Quantum and Semiclassical Optics, **10**, 861-867, (1998).
3. C.R. Carlen* and D. J. McGee, “*Influence of chromophore solubility on optical absorption and two-beam coupling gain in guest-host photorefractive polymer composites*”, Optics Communications **152**, 342-346 (1998).
2. M. Matlin and D.J. McGee, “*Photorefractive nonlinear optics in the undergraduate physics laboratory*”, American Journal of Physics, **65**, 622-634, (1997).
1. Z. Chen, D.J. McGee, N.B. Abraham, “*Pattern dynamics in photorefractive bidirectional ring resonator experiments*”, Journal of the Optical Society of America B, **13**, 1482-1490, (1996).