

BIBLIOGRAPHY

- [Anderson, '87]. Anderson, D.Z. and Lininger, D.M., *Dynamic optical interconnects: volume holograms as optical two-port operators*. Appl. Opt., 1987. **26**: p. 5031-8.
- [Anderson, '89]. Anderson, D.Z. and Feinberg, J., *Optical novelty filters*. IEEE J. Quantum Electron., 1989. **25**: p. 635-47.
- [Anderson, '91]. Anderson, D.Z., *et al.*, *Photorefractive flip-flop*. Opt. Lett., 1991. **16**: p. 250-2.
- [Anderson, '92a]. Anderson, D.Z., Benkert, C., and Crouch, D.D., *Competitive and cooperative multimode dynamics in photorefractive ring circuits*, in *Neural Networks for Perception, vol. 2, Computation, Learning, and Architectures*, H. Wechsler, Editor. 1992a, Academic: Boston.
- [Anderson, '92b]. Anderson, D.Z., *et al.*, *Optical implementation of a self-organizing feature extractor*, in *Advances in neural-information processing systems IV*, J.E. Moody, S.J. Hanson, and R.P. Lippmann, Editors. 1992b, Morgan Kaufmann: San Mateo, Calif. p. 821-8.
- [Anderson, '95]. Anderson, D.Z., Saffman, M., and Hermanns, A., *Manipulating the information carried by an optical beam with reflexive photorefractive beam coupling*. J. Opt. Soc. Am. B, 1995. **12**: p. 117-23.
- [Anderson, '99]. Anderson, D.Z., Brockett, R.W., and Nuttall, N., *Information dynamics of photorefractive two-beam coupling*. Phys. Rev. Lett., 1999. **82**(7): p. 1418-21.
- [Anderson, '00]. Anderson, D.Z., *A matrix formulation of photorefractive two-beam coupling*. Phys. Rev. A (submitted), 2000.
- [Baer, '87]. Baer, T., *Continuous-wave laser oscillation in a Nd:Yag sphere*. Opt. Lett., 1987. **12**(6): p. 392-4.
- [Baxter, '50]. Baxter, W.T., *Jewelry Gemcutting and Metalcraft*. 3rd ed. 1950, New York: McGraw Hill.
- [Breugnot, '95]. Breugnot, S., *et al.*, *Low-noise photorefractive amplification and detection of very weak signal beams*. Opt. Lett., 1995. **20**(5): p. 447-9.
- [Buse, '97]. Buse, K., *Light-induced charge transport processes in photorefractive crystals. I. Models and experimental methods*. Appl. Phys. B (Lasers and Optics), 1997. **B64**(3): p. 273-91.
- [Chang, '90]. Chang, T.Y., Hong, J., and Yeh, P., *Spatial amplification*. Opt. Lett., 1990. **15**(743-745).
- [Chomsky, '91]. Chomsky, D., *et al.*, *Laser frequency bandwidth narrowing by photorefractive two-beam coupling*. Opt. Lett., 1991. **17**(7): p. 481-3.

- [**Cohen-Tannoudji, '77a**]. Cohen-Tannoudji, C., Diu, B., and Laloe, F., *Complements AIV and EIV*, in *Quantum Mechanics*. 1977a, Hermann and John Wiley & Sons: Paris, France.
- [**Cohen-Tannoudji, '77b**]. Cohen-Tannoudji, C., Diu, B., and Laloe, F., *Complement EIII*, in *Quantum Mechanics*. 1977b, Hermann and John Wiley & Sons: Paris, France.
- [**Courtney, '98**]. Courtney, D., *et al.*, *Room temperature CW operation of InGaAsP/InP microdisk lasers*. Proc. SPIE – Int. Soc. Opt. Eng., 1998. **3286**: p. 138-51.
- [**Cronin-Golomb, '84**]. Cronin-Golomb, M., *et al.*, *Theory and applications of four-wave mixing in photorefractive media*. IEEE J. Quantum Electron., 1984. **QE-20**(1): p. 12-30.
- [**Denz, '99**]. Denz, C., *Optical Neural Networks*. 1999, FIZ Karlsruhe, Germany: Vieweg; Braunschweig.
- [**Fainman, '86**]. Fainman, Y., Klančnik, E., and Lee, S.H., *Optimal coherent image amplification by two-wave coupling in photorefractive BaTiO₃*. Opt. Eng., 1986. **25**: p. 228.
- [**Feinberg, '80**]. Feinberg, J., *Real-time edge enhancement using the photorefractive effect*. Opt. Lett., 1980. **5**: p. 330-2.
- [**Feinberg, '82**]. Feinberg, J., *Self-pumped, continuous-wave phase conjugator using internal reflection*. Opt. Lett., 1982. **7**(10): p. 486-8.
- [**Feinberg, '83**]. Feinberg, J., *Optical image processing using four-wave mixing in photorefractive materials*. Proc. SPIE – Int. Soc. Opt. Eng., 1983. **388**: p. 106-11.
- [**Feinberg, '90**]. Feinberg, J., *Phase conjugation with photorefractive materials*. Opt. & Photon. News, 1990. **1**(12): p. 30-3.
- [**Gabor, '69**]. Gabor, D., *Associative holographic memories*. IBM J. Res. Dev., 1969. **13**(156-159).
- [**Gu, '93**]. Gu, C. and Yeh, P., *Photorefractive devices for optical neural networks*. Optical Memory & Neural Networks, 1993. **2**(3): p. 185-98.
- [**Gunter, '88**]. Gunter, P. and Huignard, J.-P., *Photorefractive materials and their applications*. Vol. I & II. 1988, New York: Springer Verlag.
- [**Hamel de Monchenault, '87**]. Hamel de Monchenault, G., Loiseaux, B., and Huignard, J.-P., *Amplification of high bandwidth signals through two-wave mixing in photorefractive Bi₁₂SiO₂₀ crystals*. Appl. Phys. Lett., 1987. **50**(25): p. 1794-6.
- [**Hamel de Monchenault, '88**]. Hamel de Monchenault, G. and Huignard, J.-P., *Two-wave mixing with time-modulated signal in Bi₁₂SiO₂₀ theory and application to homodyne wave-front detection*. J. Appl. Phys., 1988. **63**(3): p. 624-7.

- [He, '94]. He, Q.B. and Yeh, P., *Fanning noise reduction in photorefractive amplifiers using incoherent erasures*. Appl. Opt., 1994. **33**(2): p. 283-7.
- [Hong, '90]. Hong, J., Chiou, A.E., and Yeh, P., *Image amplification by two-wave mixing in photorefractive crystals*. appl. Opt., 1990. **39**: p. 3026-9.
- [Hong, '93]. Hong, J.H. and Chang, T.Y., *Frequency-agile rf notch filter that uses photorefractive two-beam coupling*. Opt. Lett., 1993. **18**: p. 164-6.
- [Horowitz, '91a]. Horowitz, M. and Fischer, B., *Photorefractive novelty filters and the dynamics of their nonlinear wave mixing*. Proceedings of the 17th Convention of Electrical and Electronics Engineers in Israel, 1991a: p. xiv+429, 10-14.
- [Horowitz, '91b]. Horowitz, M., Kligler, D., and Fischer, B., *Time-dependent behavior of photorefractive two- and four-wave mixing*. J. Opt. Soc. Am. B, 1991b. **8**(10): p. 2204-17.
- [Ing, '91]. Ing, R.K. and Monchalin, P., *Broadband optical detection of ultrasound by two-wave mixing in a photorefractive crystal*. Appl. Phys. Lett., 1991. **59**: p. 3233-5.
- [Jahoda, '84]. Jahoda, F.C., Weber, P.G., and Feinberg, J., *Optical feedback, wavelength response, and interference effects of self-pumped phase conjugation in BaTiO₃*. Opt. Lett., 1984. **9**(8): p. 362-4.
- [Joseph, '92]. Joseph, J., et al., *Real-time image processing using selective erasure in photorefractive two-wave mixing*. Appl. Opt., 1992. **31**: p. 4769-72.
- [Jungner, '95]. Jungner, P., et al., *Absolute frequency of the molecular Iodine transition R(56) 32-0 near 532nm*. IEEE Trans. Instrum. Meas., 1995. **44**: p. 151-4.
- [Khoury, '91]. Khoury, J., Woods, C.L., and Cronin-Golomb, M., *Photorefractive holographic interference novelty filter*. Opt. Commun., 1991. **82**(5-6): p. 533-8.
- [Khoury, '93]. Khoury, J., Ryan, V., and Cronin-Golomb, M., *Photorefractive frequency converter and phase-sensitive detector*. J. Opt. Soc. Am. B, 1993. **10**(1): p. 72-82.
- [Khoury, '94]. Khoury, J., et al., *All-optical joint Fourier transform correlator*. Appl. Opt., 1994. **33**: p. 8216-25.
- [Klein, '86a]. Klein, M.B., et al., *Imaging threshold detector using a phase-conjugate resonator in BaTiO₃*. Opt. Lett., 1986a. **11**(575-577).
- [Klein, '86b]. Klein, M.B. and Valley, G.C., *Characteristics of BaTiO₃ for electro-optic devices*. Proc. SPIE - Int. Soc. Opt. Eng., 1986b. **567**: p. 116-20.
- [Kogelnik, '69]. Kogelnik, H., *Coupled wave theory for thick hologram gratings*. Bell Syst. Tech. J., 1969. **48**(2909-2947).

- [Kukhtarev, '79]. Kukhtarev, N.V., *et al.*, *Holographic storage in electrooptic crystals. II. Beam coupling - Light amplification*. *Ferroelectrics*, 1979. **22**: p. 961-4.
- [Kuwata-Gonokami, '95]. Kuwata-Gonokami, M., *et al.*, *Polymer microdisk and microring lasers*. *Opt. Lett.*, 1995. **20**(20): p. 2093-5.
- [LaGasse, '94]. LaGasse, M.J., *et al.*, *Optical carrier filtering for high dynamic range fibre optic links*. *Electron. Lett.*, 1994. **30**(25): p. 2157-8.
- [Lin, '98]. Lin, Y., *et al.*, *Observation of the disk mode pattern in organic microdisk*. *Solid State Comm.*, 1998. **105**(7): p. 445-8.
- [Lindsay, '70]. Lindsay, R.B., *Lord Rayleigh- the man and his work*. 1970, New York: Pergamon Press.
- [Lininger, '90]. Lininger, D.M., *et al.*, *Theory of bistability and self pulsing in a ring resonator with saturable photorefractive gain and loss*. *Opt. Commun.*, 1990. **76**: p. 89-96.
- [Liu, '93]. Liu, L. and Liu, X., *Matrixing coupled wave theory of photorefractive hologram recorded by two-beam coupling*. *J. Mod. Opt.*, 1993. **40**(11): p. 2257-65.
- [Loayssa, '00]. Loayssa, A., Benito, D., and Garde, R.T., *Optical carrier-suppression technique with a Brillouin-erbium fiber laser*. *Opt. Lett.*, 2000. **25**(4): p. 197-9.
- [MacCormack, '96]. MacCormack, S. and Feinberg, J., *Revealing 180° domains in ferroelectric crystals by photorefractive beam coupling*. *Appl. Opt.*, 1996. **35**(30): p. 5961-3.
- [Marrakchi, '90]. Marrakchi, A., *et al.*, *Dynamic holographic interconnects with analog weights in photorefractive crystals*. *Opt. Eng.*, 1990. **29**(3): p. 215-24.
- [Mazur, '99]. Mazur, A., *et al.*, *Light-induced charge transport in photorefractive BaTiO₃:Fe and Ba_{0.77}Ca_{0.23}TiO₃:Fe*. *Radiat. Eff. Defects Solids (Switzerland)*, 1999. **150**(1-4): p. 673-8.
- [Mills, '85]. Mills, P. and Paige, E.G.S., *Holographically formed, highly selective, infra-red filter in iron-doped lithium niobate*. *Electron. Lett.*, 1985. **21**: p. 885-6.
- [Min, '88]. Min, K., *et al.*, *Automated two speaker separation system*. *Intern. Conf. on Acoustics, Speech and Sig. Proc.*, 1988: p. 5 vol. 2928, 537-40 vol.1.
- [Mok, '91]. Mok, F.H., Tackitt, M.C., and Stoll, H.M., *Storage of 500 high-resolution holograms in a LiNbO₃ crystal*. *Opt. Lett.*, 1991. **16**(8): p. 605-7.
- [Montgomery, '95]. Montgomery, R. and DeSalvo, R., *A novel technique for double sideband suppressed carrier modulation of optical fields*. *IEEE Photon. Tech. Lett.*, 1995. **7**(4): p. 434-6.

- [Murray, '00]. Murray, T.D., Tuovinen, H., and Krishnaswamy, S., *Adaptive optical array receivers for detection of surface acoustic waves*. Appl. Opt., 2000. **39**(19): p. 3276-84.
- [Neifeld, '93]. Neifeld, M.A. and Psaltis, D., *Programmable image associative memory using an optical disk and a photorefractive crystal*. Appl. Opt., 1993. **32**(23): p. 4398-409.
- [Psaltis, '88]. Psaltis, D., Brady, D., and Wagner, K., *Adaptive optical networks using photorefractive crystals*. Appl. Opt., 1988. **27**(1752-1759).
- [Puoet, '96]. Puoet, B.F., *et al.*, *Heterodyne interferometer with two-wave mixing in photorefractive crystals for ultrasound detection on rough surfaces*. Appl. Phys. Lett., 1996. **69**: p. 3782-4.
- [Rakuljic, '93]. Rakuljic, G.A. and Leyva, V., *Volume holographic narrow-band optical filter*. Opt. Lett., 1993. **18**(6): p. 459-61.
- [Ringhofer, '00]. Ringhofer, K.H., *et al.*, *Shaping of photorefractive two-wave coupling by fast phase modulation*. Phys. Rev. E, 2000. **61**(2): p. 2029-37.
- [Saffman, '91]. Saffman, M., Benkert, C., and Anderson, D.Z., *Self-organizing photorefractive frequency demultiplexer*. Opt. Lett., 1991. **16**: p. 1993-5.
- [Saxena, '90]. Saxena, R., *et al.*, *Diffraction properties of multiple-beam photorefractive gratings*. J. Opt. Soc. Am. B, 1990. **7**(7): p. 1210-5.
- [Sayano, '88]. Sayano, K., Rakuljic, G.A., and Yariv, A., *Thresholding semilinear phase conjugate mirror*. Opt. Lett., 1988. **13**: p. 143-5.
- [Schiller, '91]. Schiller, S. and Byer, R.L., *High-resolution spectroscopy of whispering gallery modes in large dielectric spheres*. Opt. Lett., 1991. **16**(15): p. 1138-40.
- [Schiller, '92]. Schiller, S., *et al.*, *Fused-silica monolithic total-internal-reflection resonator*. Opt. Lett., 1992. **17**(5): p. 378-80.
- [Scruby, '90]. Scruby, C.B. and Drain, L.E., *Laser Ultrasonics, Techniques and Applications*. 1990, Bristol, UK: Adam Hilger.
- [Sharp, '94]. Sharp, E.J., *et al.*, *Photorefractive image processing using mutually-pumped phase conjugators*. Proc. SPIE – Int. Soc. Opt. Eng., 1994. **2237**: p. 347-59.
- [Solymar, '96]. Solymar, L., Webb, D.J., and Grunnet-Jepsen, A., *The physics and applications of photorefractive materials*. Oxford series in optical and imaging sciences II. 1996, New York: Oxford University Press Inc.
- [Staebler, '75]. Staebler, D.L., *et al.*, *Multiple storage and erasure of fixed holograms in Fe-doped LiNbO₃*. Appl. Phys. Lett., 1975. **26**: p. 182-4.
- [Stojkov, '92]. Stojkov, P., Timotijevic, D., and Belic, M., *Symmetries of two-wave mixing in photorefractive crystals*. Opt. Lett., 1992. **17**(20): p. 1406-8.

- [Tonda-Goldstein, '00]. Tonda-Goldstein, S., *et al.*, *Stimulated Brillouin scattering for microwave signal modulation depth increase in optical links*. Electron. Lett., 2000. **36**(11): p. 944-6.
- [Uesu, '95]. Uesu, Y., *et al.*, *Recent development of optical novelty filter and dynamics of optical novelty filter with use of the CAT-type self-pumped phase conjugate mirror*. Ferroelectrics, 1995. **174**(1-2): p. 133-48.
- [Volk, '94]. Volk, T., Rubinina, N., and Wohlecke, M., *Optical-damage-resistant impurities in lithium niobate*. J. Opt. Soc. Am. B, 1994. **11**(9): p. 1681-7.
- [Weiss, '89]. Weiss, S., *et al.*, *Photorefractive dynamic optical interconnects*. Proc. SPIE - Int. Soc. Opt. Eng., 1989. **1018**: p. 55-7.
- [White, '82]. White, J.O., *et al.*, *Coherent oscillation by self-induced gratings in the photorefractive crystal BaTiO₃*. Appl. Phys. Lett., 1982. **40**: p. 450-2.
- [Ye, '96]. Ye, J., *et al.*, *Hyperfine structure and absolute frequency of the ⁸⁷Rb5P_{3/2} state*. Opt. Lett., 1996. **21**(16): p. 1280-2.
- [Yeh, '85]. Yeh, P., *Theory of Unidirectional Photorefractive Resonators*. J. Opt. Soc. Am. B, 1985. **2**: p. 1924-8.
- [Yeh, '88]. Yeh, P., Chang, T.Y., and Ewbank, M.D., *Model for mutually pumped phase conjugation*. J. Opt. Soc. Am., 1988. **5**: p. 1743-9.
- [Yeh, '92]. Yeh, P., *Photorefractive phase conjugators*. Proc. IEEE, 1992. **80**(3): p. 436-50.
- [Yeh, '93]. Yeh, P., *Introduction to Photorefractive Nonlinear Optics*. 1993, New York: John Wiley & Sons Inc.
- [Yu, '92]. Yu, F.T.S., *et al.*, *Optical novelty filter with phase carrier*. Opt. Commun., 1992. **92**(4-6): p. 205-8.
- [Yu, '94]. Yu, F.T.S., Yin, S., and Wang, C.-M., *A content addressable polychromatic neural net using a (Ce:Fe)-doped LiNbO₃ photorefractive crystal*. Opt. Commun., 1994. **107**: p. 300-8.
- [Zel'dovich, '95]. Zel'dovich, B.Y., Mamaev, A.V., and Shkunov, V.V., *Speckle-wave interactions in application to holography and nonlinear optics*. 1995, Boca Raton, FL: CRC Press, Inc.
- [Zozulya, '95]. Zozulya, A. and Anderson, D.Z., *Spatial structure of light and nonlinear refractive index generated by fanning in photorefractive media*. Phys. Rev. A, 1995. **52**: p. 878-81.
- [Zozulya, '95]. Zozulya, A.A., Saffman, M., and Anderson, D.Z., *Stability analysis of two photorefractive ring resonator circuits: the flip-flop and the feature extractor*. J. Opt. Soc. Am. B, 1995. **12**: p. 1036-47.