

A1.5 (S. Linden / M. Wegener)

- [A1.5:1] ‡ S. Linden, C. Enkrich, G. Dolling, M.W. Klein, J. Zhou, T. Koschny, C.M. Soukoulis, S. Burger, F. Schmidt, and M. Wegener, *Photonic Metamaterials: Magnetism at Optical Frequencies*, IEEE J. Sel. Top. Quant. **12**, 1097 (2006)
- [A1.5:2] ‡ G. Dolling, M. Wegener, S. Linden, and C. Hormann, *Photorealistic images of objects in effective negative-index materials*, Opt. Express **14**, 1842 (2006)
- [A1.5:3] ‡ M.W. Klein, C. Enkrich, M. Wegener, C.M. Soukoulis, and S. Linden, *Single-slit split-ring resonators at optical frequencies: Limits of size scaling*, Opt. Lett. **31**, 1259 (2006)
- [A1.5:4] ‡ G. Dolling, C. Enkrich, M. Wegener, C.M. Soukoulis, and S. Linden, *Observation of simultaneous negative phase and group velocity of light*, Science **312**, 892 (2006)
- [A1.5:5] ‡ G. Dolling, C. Enkrich, M. Wegener, C.M. Soukoulis, and S. Linden, *A low-loss negative-index metamaterial at telecommunication wavelengths*, Opt. Lett. **31**, 1800 (2006)
- [A1.5:6] S. Linden, M. Decker, and M. Wegener, *One-dimensional magnetic photonic crystals*, Phys. Rev. Lett. **97**, 083902 (2006)
- [A1.5:7] M.W. Klein, C. Enkrich, M. Wegener, and S. Linden, *Second-harmonic generation from magnetic metamaterials*, Science **313**, 502 (2006)
- [A1.5:8] G. Dolling, S. Linden, and M. Wegener, *Metamaterialien: Licht im Rückwärtsgang*, Phys. Unserer Zeit **37**, 157 (2006)
- [A1.5:9] S. Linden and M. Wegener, *Metamaterialien werden sichtbar*, Physik Journal **5**, 29 (2006)
- [A1.5:10] ‡ G. Dolling, M. Wegener, A. Schädle, S. Burger, and S. Linden, *Observation of magnetization waves in negative-index photonic metamaterials*, Appl. Phys. Lett. **89**, 231118 (2006)
- [A1.5:11] ‡ G. Dolling, M. Wegener, C.M. Soukoulis, and S. Linden, *Negative-index metamaterial at 780 nm wavelength*, Opt. Lett. **32**, 53 (2007)
- [A1.5:12] G. Dolling, M. Wegener, and S. Linden, *Der falsche Knick im Licht*, Phys. Unserer Zeit **38**, 24 (2007)
- [A1.5:13] ‡ C.M. Soukoulis, S. Linden, and M. Wegener, *Negative refractive index at optical wavelengths*, Science **315**, 47 (2007)
- [A1.5:14] N. Feth, C. Enkrich, M. Wegener, and S. Linden, *Large-area magnetic metamaterials via compact interference lithography*, Opt. Express **15**, 501 (2007)
- [A1.5:15] G. Dolling, M. Wegener, and S. Linden, *Realization of a three-functional-layer negative-index photonic metamaterial*, Opt. Lett. **32**, 551 (2007)
- [A1.5:16] M. Decker, M.W. Klein, M. Wegener, and S. Linden, *Circular dichroism of planar chiral magnetic metamaterials*, Opt. Lett. **32**, 856 (2007)
- [A1.5:17] M.W. Klein, N. Feth, M. Wegener, and S. Linden, *Experiments on second- and third-harmonic generation from magnetic metamaterials*, Opt. Express **15**, 5238 (2007)
- [A1.5:18] M. Wegener, G. Dolling, and S. Linden, *Backward waves moving forward*, Nature Mater. **6**, 475 (2007)
- [A1.5:19] ‡ G. Dolling, M. Wegener, C.M. Soukoulis, and S. Linden, *Design-related losses of double-fishnet negative-index photonic metamaterials*, Opt. Express **15**, 11536 (2007)

- [A1.5:20] ‡ G. Dolling, M.W. Klein, M. Wegener, A. Schädle, B. Kettner, S. Burger, and S. Linden, *Negative beam displacements from negative-index photonic metamaterials*, Opt. Express **15**, 14219 (2007)
- [A1.5:21] M.S. Rill, C. Plet, M. Thiel, G. von Freymann, S. Linden, and M. Wegener, *Photonic Metamaterials by Direct Laser Writing and Silver Chemical Vapor Deposition*, Nature Mater. **7**, 543 (2008)
- [A1.5:22] * M. Husnik, M.W. Klein, N. Feth, M. König, J. Niegemann, K. Busch, S. Linden, and M. Wegener, *Absolute Extinction Cross Section of Individual Magnetic Split-Ring Resonators*, Nature Photonics **2**, 614 (2008)
- [A1.5:23] ‡ N. Feth, S. Linden, M.W. Klein, M. Decker, F.B.P. Niesler, Y. Zeng, W. Hoyer, J. Liu, S.W. Koch, J.V. Moloney, and M. Wegener, *Second-harmonic generation from complementary split-ring resonators*, Opt. Lett. **33**, 1975 (2008)
- [A1.5:24] ‡ M. Wegener, J.L. Garcia Pomar, N. Meinzer, M. Ruther, and S. Linden, *Toy model for plasmonic metamaterial resonances coupled to two-level system gain*, Opt. Express **16**, 19785 (2008)
- [A1.5:25] M.S. Rill, C.E. Kriegler, M. Thiel, G. von Freymann, S. Linden, and M. Wegener, *Negative-index bianisotropic photonic metamaterial fabricated by direct laser writing and silver shadow evaporation*, Opt. Lett. **34**, 19 (2009)
- [A1.5:26] * C.E. Kriegler, M.S. Rill, M. Thiel, E. Müller, S. Essig, A. Frölich, G. von Freymann, S. Linden, D. Gerthsen, H. Hahn, K. Busch, and M. Wegener, *Transition between corrugated metal films and split-ring-resonator arrays*, Appl. Phys. B **96**, 749 (2009)
- [A1.5:27] M. Decker, S. Linden, and M. Wegener, *Coupling effects in low-symmetry planar split-ring resonator arrays*, Opt. Lett. **34**, 1579 (2009)
- [A1.5:28] M. Wegener and S. Linden, *Giving light yet another new twist*, Physics **2**, 3 (2009)
- [A1.5:29] ‡ A. Fang, Th. Koschny, M. Wegener, and C.M. Soukoulis, *Self-consistent calculation of metamaterials with gain*, Phys. Rev. B **79**, 241104(R) (2009)
- [A1.5:30] * F.B.P. Niesler, N. Feth, S. Linden, J. Niegemann, J. Gieseler, K. Busch, and M. Wegener, *Second-harmonic generation from split-ring resonators on a GaAs substrate*, Opt. Lett. **34**, 1997 (2009)
- [A1.5:31] * J.K. Gansel, M. Thiel, M.S. Rill, M. Decker, K. Bade, V. Saile, G. von Freymann, S. Linden, and M. Wegener, *Gold helix photonic metamaterial as broadband circular polarizer*, Science **325**, 1513 (2009)
- [A1.5:32] ‡ M. Decker, M. Ruther, C. Kriegler, J. Zhou, C.M. Soukoulis, S. Linden, and M. Wegener, *Strong optical activity from twisted-cross photonic metamaterials*, Opt. Lett. **34**, 2501 (2009)
- [A1.5:33] M. Decker, S. Burger, S. Linden, and M. Wegener, *Magnetization waves in split-ring-resonator arrays: Evidence for retardation effects*, Phys. Rev. B **80**, 193102 (2009)
- [A1.5:34] J.C. Halimeh, T. Ergin, J. Mueller, N. Stenger, and M. Wegener, *Photorealistic images of carpet cloaks*, Opt. Express **17**, 19328 (2009)
- [A1.5:35] C.E. Kriegler, M.S. Rill, S. Linden, and M. Wegener, *Bianisotropic photonic metamaterials*, IEEE J. Sel. Top. Quant. **16**, 367 (2010)
- [A1.5:36] * N. Feth, M. König, M. Husnik, K. Stannigel, J. Niegemann, K. Busch, M. Wegener, and S. Linden, *Electromagnetic interaction of split-ring resonators: The role of separation and relative orientation*, Opt. Express **18**, 6545 (2010)

- [A1.5:37] J.K. Gansel, M. Wegener, S. Burger, and S. Linden, *Gold helix photonic metamaterials: A numerical parameter study*, Opt. Express **18**, 1059 (2010)
- [A1.5:38] ‡ * T. Ergin, N. Stenger, P. Brenner, J.B. Pendry, and M. Wegener, *Three-Dimensional Invisibility Cloak at Optical Wavelengths*, Science **328**, 337 (2010)
- [A1.5:39] ‡ M. Decker, R. Zhao, C.M. Soukoulis, S. Linden, and M. Wegener, *Twisted split-ring-resonator photonic metamaterial with huge optical activity*, Opt. Lett. **35**, 1593 (2010)
- [A1.5:40] ‡ M. Burrelli, D. Diessel, D. van Osten, S. Linden, M. Wegener, and L. Kuipers, *Phase-sensitive near-field optical microscopy on negative-index metamaterials*, Nano Lett. **10**, 2480 (2010)
- [A1.5:41] T. Ergin, J.C. Halimeh, N. Stenger, and M. Wegener, *Optical microscopy of 3D carpet cloaks: ray-tracing simulations*, Opt. Express **18**, 20535 (2010)
- [A1.5:42] * L. Shao, M. Ruther, S. Linden, S. Essig, K. Busch, J. Weissmüller, and M. Wegener, *Electrochemical Modulation of Photonic Metamaterials*, Adv. Mater. **22**, 5173 (2010)
- [A1.5:43] M. Wegener and S. Linden, *Shaping Optical Space with Metamaterials*, Physics Today **63**, 32 (2010)
- [A1.5:44] D. Diessel, M. Decker, S. Linden, and M. Wegener, *Near-field optical experiments on low-symmetry split-ring-resonator arrays*, Opt. Lett. **35**, 3661 (2010)
- [A1.5:45] ‡ * N. Meinzer, M. Ruther, S. Linden, C.M. Soukoulis, G. Khitrova, J. Hendrickson, J.D. Olitzky, H.M. Gibbs, and M. Wegener, *Arrays of Ag split-ring resonators coupled to InGaAs single-quantum-well gain*, Opt. Express **18**, 24140 (2010)
- [A1.5:46] ‡ R. Schmied, J.C. Halimeh, and M. Wegener, *Conformal carpet and grating cloaks*, Opt. Express **18**, 24361 (2010)
- [A1.5:47] C.M. Soukoulis and M. Wegener, *Optical Metamaterials: More Bulky and Less Lossy*, Science **330**, 1633 (2010)
- [A1.5:48] * M. Ruther, L. Shao, S. Linden, J. Weissmüller, and M. Wegener, *Electrochemical Restructuring of Plasmonic Metamaterials*, Appl. Phys. Lett. **98**, 013112 (2011)
- [A1.5:49] ‡ G. Boudarham, N. Feth, V. Myroshnychenko, S. Linden, J. Garcia de Abajo, M. Wegener, and M. Kociak, *Spectral Imaging of Individual Split-Ring Resonators*, Phys. Rev. Lett. **105**, 255501 (2010)
- [A1.5:50] F.B.P. Niesler, N. Feth, S. Linden, and M. Wegener, *Second-harmonic optical spectroscopy on split-ring-resonator arrays*, Opt. Lett. **36**, 1533 (2011)
- [A1.5:51] J. Fischer, T. Ergin, and M. Wegener, *Three-dimensional polarization-independent visible-frequency carpet invisibility cloak*, Opt. Lett. **36**, 2059 (2011)
- [A1.5:52] ‡ J.C. Halimeh, R. Schmied, and M. Wegener, *Newtonian photorealistic ray tracing of grating cloaks and correlation-function-based cloaking-quality assessment*, Opt. Express **19**, 6078 (2011)
- [A1.5:53] ‡ M. Decker, N. Feth, C.M. Soukoulis, S. Linden, and M. Wegener, *Retarded long-range interaction in split-ring-resonator square arrays*, Phys. Rev. B **84**, 085416 (2011)
- [A1.5:54] J. Müller, T. Ergin, N. Stenger, and M. Wegener, *Doppelt oder gar nicht sehen*, Physik Journal **3**, 16 (2011)

- [A1.5:55] ‡ M.J. Huttunen, G. Bautista, M. Decker, S. Linden, M. Wegener, and M. Kauranen, *Nonlinear chiral imaging of subwavelength-sized twisted-cross gold nanodimers*, Opt. Mater. Express **1**, 46 (2011)
- [A1.5:56] ‡ C.M. Soukoulis and M. Wegener, *Past achievements and future challenges in the development of three-dimensional photonic metamaterials*, Nature Photonics **5**, 523 (2011)
- [A1.5:57] A. Frölich and M. Wegener, *Spectroscopic characterization of highly doped ZnO by atomic-layer deposition for three-dimensional infrared metamaterials*, Opt. Mater. Express **1**, 883 (2011)
- [A1.5:58] T. Ergin, J. Fischer, and M. Wegener, *Optical phase cloaking of 700-nm light waves in the far field by a three-dimensional carpet cloak*, Phys. Rev. Lett. **107**, 173901 (2011)
- [A1.5:59] ‡ * N. Meinzer, M. König, M. Ruther, S. Linden, G. Khitrova, H.M. Gibbs, K. Busch, and M. Wegener, *Distance-dependence of the coupling between splitting resonators and single-quantum-well gain*, Appl. Phys. Lett. **99**, 111104 (2011)