



Ortwin Hess

Leverhulme Chair in Metamaterials,
Professor of Physics,
Imperial College London

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‘Trapped rainbow’ storage of light in metamaterials KL Tsakmakidis, AD Boardman, O Hess Nature 450 (7168), 397	622	2007
Active nanoplasmonic metamaterials O Hess, JB Pendry, SA Maier, RF Oulton, JM Hamm, KL Tsakmakidis Nature materials 11 (7), 573	406	2012
Single-molecule strong coupling at room temperature in plasmonic nanocavities R Chikkaraddy, B de Nijs, F Benz, SJ Barrow, OA Scherman, E Rosta, ... Nature 535 (7610), 127	327	2016
Rheological and small angle neutron scattering investigation of shear-induced particle structures of concentrated polymer dispersions submitted to plane Poiseuille and Couette ... HM Laun, R Bung, S Hess, W Loose, O Hess, K Hahn, E Hädicke, ... Journal of Rheology 36 (4), 743-787	293	1992
Overcoming losses with gain in a negative refractive index metamaterial S Wuestner, A Pusch, KL Tsakmakidis, JM Hamm, O Hess Physical review letters 105 (12), 127401	272	2010
Ultrafast plasmonic nanowire lasers near the surface plasmon frequency TPH Sidiropoulos, R Röder, S Geburt, O Hess, SA Maier, C Ronning, ... Nature Physics 10 (11), 870	159	2014
Intermediate band solar cells: Recent progress and future directions Y Okada, NJ Ekins-Daukes, T Kita, R Tamaki, M Yoshida, A Pusch, ... Applied physics reviews 2 (2), 021302	150	2015
High-dimensional chaotic dynamics of an external cavity semiconductor laser I Fischer, O Hess, W Elsässer, E Göbel Physical review letters 73 (16), 2188	131	1994
Maxwell-Bloch equations for spatially inhomogeneous semiconductor lasers. I. Theoretical formulation O Hess, T Kuhn Physical Review A 54 (4), 3347	130	1996

TITLE	CITED BY	YEAR
Complex spatio-temporal dynamics in the near-field of a broad-area semiconductor laser I Fischer, O Hess, W Elsässer, E Göbel EPL (Europhysics Letters) 35 (8), 579	125	1996
Filamentation and beam propagation in broad-area semiconductor lasers O Hess, SW Koch, JV Moloney IEEE journal of quantum electronics 31 (1), 35-43	120	1995
Spatiotemporal chaos in broad-area semiconductor lasers H Adachihara, O Hess, E Abraham, P Ru, JV Moloney JOSA B 10 (4), 658-665	120	1993
Silicon-based two-dimensional photonic crystal waveguides C Jamois, RB Wehrspohn, LC Andreani, C Hermann, O Hess, U Gösele Photonics and Nanostructures-Fundamentals and Applications 1 (1), 1-13	117	2003
Existence of Temperature on the Nanoscale M Hartmann, G Mahler, O Hess Physical review letters 93 (8), 080402	102	2004
Surface plasmon polaritons in generalized slab heterostructures with negative permittivity and permeability KL Tsakmakidis, C Hermann, A Klaedtke, C Jamois, O Hess Physical Review B 73 (8), 085104	92	2006
Dirac-like plasmons in honeycomb lattices of metallic nanoparticles G Weick, C Woollacott, WL Barnes, O Hess, E Mariani Physical review letters 110 (10), 106801	87	2013
Single-mode operation in the slow-light regime using oscillatory waves in generalized left-handed heterostructures KL Tsakmakidis, A Klaedtke, DP Aryal, C Jamois, O Hess Applied physics letters 89 (20), 201103	78	2006
Spatio-temporal dynamics of semiconductor lasers: Theory, modelling and analysis O Hess, T Kuhn Progress in quantum electronics 20 (2), 85-179	77	1996
Ultrafast gain dynamics in quantum-dot amplifiers: Theoretical analysis and experimental investigations M van der Poel, E Gehrig, O Hess, D Birkedal, JM Hvam IEEE Journal of Quantum Electronics 41 (9), 1115-1123	73	2005
Controlling delay-induced chaotic behavior of a semiconductor laser with optical feedback C Simmendinger, O Hess Physics Letters A 216 (1-5), 97-105	73	1996