

Curriculum Vitae

Personal information

Name: Ali Mohammad Ahmad Adawi

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Professional information

Academic rank: Reader in physics (the title of reader in the United Kingdom denotes an appointment for a senior academic with a distinguished international reputation in research or scholarship. Reader is a professor without a chair)

Scopus ID: 6602478486

Documents: 79

h-index: 24

Citations: 1425

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Google Scholar: [Ali Adawi](#)

Citations: 1821

h-index: 26

i-index: 43

Employment History

2021-to present: Reader in Physics, University of Hull

2016-2021: Senior Lecturer in Physics, University of Hull

2010-2016: Lecturer in Physics, University of Hull

2003-2010: Postdoctoral, University of Sheffield

Academic History

Postgraduate Certificate in Higher Education, 2012, University of Hull.

PhD in physics University of Sheffield, 2002.

MSc in Physics, University of Jordan, 1996.

BSc in Physics, University of Jordan, 1993.

Researcher experience and interest

My research focuses on areas of organic and inorganic semiconductor nanostructures, nanophotonics and their technological applications. This includes hybrid organic/inorganic two-dimensional photonic crystal nano-cavities, plasmonic and hybrid plasmonic/photonic nanopatch antennas for highly efficient nano-light sources, enhanced Förster energy transfer, Surface-Enhanced Raman Scattering (SERS) and the development of plasmonic nano-gaps for single molecule detection, near-zero refractive index metamaterials for directive emission and the spectroscopy of organic and inorganic nanomaterials. I have over 70 scientific publications and one patent. My research has led to a number of highlights. In particular my work on self-assembled block copolymer blends was on the BBC news website, my work on organic micropillars was featured on the cover page of the journal Advanced Materials, and my work on optical nanolithography was on the research highlights of the journal Nature Photonics. I have developed several approaches to study light matter interactions based on hybrid organic/inorganic systems including the two dimensional photonic crystals nano-cavities suitable to enhance the emission process of organic semiconductors by a factor of more than 40 times working in the visible region, plasmonic nanopatch antenna for highly efficient nano-light sources, near-zero refractive index metamaterials for directive emission

within the visible range and efficient out-coupling and beaming methods using Tamm optical states via surface plasmon polariton excitation. These developments represent a significant technological breakthrough, as they enable ultra-low threshold lasers and efficient quantum information processing devices to be created that operate at room temperature.

Grants

- 1- POSEIDON: Nanophotonic devices applying self-assembled colloids for novel on-chip light (POSEIDON), 2020-2024, amount awarded €3M, funding body Horizon2020 EU.
- 2- Optical Memristors for convolutional neural networks, March 2020-May 2020, amount awarded £40,000, EU.
- 3- Self-assembly of two-dimensional colloidal alloys for metamaterials applications, amount awarded, £654,934, funding body EPSRC, start date January 2015, end date March 2018.
- 4- EPSRC, Photo- /electro active materials based on Octahedral Molybdenum Cluster, £15,000, 1-1-2016 to 30-6-2016.
- 5- Hull Solar Cells, amount awarded £206148, funding body HEIF, start date April 2012, end date April 2014.

Research Students

In the last 14 years I supervised 8 PhD students as first supervisor, 14 PhD students as second supervisor, 2 MSc students and large number of final year BSc and Mphys students.

Examination of Doctoral Thesis

As a PhD examiner I have participated in 12 PhD exams, 6 of them as an internal examiner and 6 exams as an external in the University of St Andrews, University of Sheffield, University of Kings College London and Trinity College Dublin.

Teaching

- Quantum physics for first year
- Intermediate Quantum Mechanics for second year.
- Further Quantum Mechanics for fourth year.
- Electrodynamics for second year
- Nanophotonics for fourth year
- Theoretical astrophysics for third and fourth year
- First year tutorials
- Second year tutorials
- First year lab
- Final year projects coordinator

Admin

- Third and fourth year tutor.
- Ethics committee.
- Physics laser safety officer.

Patents

One patent, GB0505298.0 "Improving the light extraction efficiency of OLED using highly reflective Ba/Ag cathode." In his work the extraction efficiency of polymeric light emitting diodes has been enhanced by improving the cathode reflectivity using Ba/Ag as cathode materials.

Publications

1. "Improving the Efficiency of Bulk-heterojunction Solar Cells through Plasmonic Enhancement within a Silver Nanoparticle-Loaded Optical Spacer Layer, Mohammed A Ibrahim, Bassam G Rasheed, Betul Canimkurbey, **Ali M Adawi**, Jean-Sebastien G Bouillard, Mary O'Neill, ACS Omega, 2025, <https://doi.org/10.1021/acsomega.4c08801>.

2. "Impact of Surface Ligand on the Biocompatibility of InP/ZnS Quantum Dots with Platelets", H  lio M Gil, Zoe Booth, Thomas W Price, Jessica Lee, Leigh Naylor-Adamson, Michelle Avery, Alina Muravitskaya, Nicole Hondow, David Allsup, J  rgen E Schneider, Khalid Naseem, **Ali M Adawi**, Jean-Sebastien G Bouillard, Thomas W Chamberlain, Simon DJ Calaminus, Graeme J Stasiuk, *Small* 2024, 20, 2304881.
3. "Plasmons Enhancing Sub-Bandgap Photoconductivity in TiO₂ Nanoparticles Film", Mohammed A Ibrahim, Emanuele Verrelli, **Ali M. Adawi**, Jean-Sebastien G Bouillard, Mary O'Neill, *ACS Omega*, 2024, 9, 9, 10169–10176.
4. "Enhanced Switching in Solid Polymer Electrolyte Memristor Devices via the addition of Interfacial Barriers and Quantum Dots", M. A. Gater, **A. M. Adawi**, N. T. Kemp, *ACM International Conference Proceeding Series*, 2023, 37.
5. "Long-Range and High-Efficiency Plasmon-Assisted F  rster Resonance Energy Transfer", Abdullah O Hamza, Ali Al-Dulaimi, Jean-Sebastien G Bouillard, **Ali M Adawi**, *J. Phys. Chem. C* 2023, 127, 44, 21611–21616.
6. "Magnetic Mode Coupling in Hyperbolic Bowtie Meta-Antennas", Sema Ebrahimi, Alina Muravitskaya, **Ali M. Adawi**, Anne Laure Baudrion, Pierre Michel Adam, Jean Sebastien G. Bouillard, *J. Phys. Chem. Lett.* 2023, 14, 35, 7824–7832.
7. "Organic copolymer lasing from single defect microcavity fabricated using laser patterning", Peter Claronino, Rahul Jayaprakash, Till Jessewitsch, Rachel C Kilbride, Timothy Thornber, Alina Muravitskaya, Robert DJ Oliver, Ullrich Scherf, Jean-Sebastien G Bouillard, **Ali M Adawi**, David G Lidzey, *J. Mater. Chem. C*, 2023, **11**, 8204-8213.
8. "Stark Effect Control of the Scattering Properties of Plasmonic Nanogaps Containing an Organic Semiconductor", Donatello Pagnotto, Alina Muravitskaya, David M. Benoit, Jean-Sebastien G. Bouillard and **Ali M. Adawi**, *ACS Applied Optical Materials*, 2023, 1, 500–506.
9. "Using adsorption kinetics to assemble vertically aligned nanorods at liquid interfaces for metamaterial applications", S. O. Morgan, A. Muravitskaya, C. Lowe, **A. M. Adawi**, J.-S. G. Bouillard, T. S. Horozov, G. J. Stasiuk and D. M. A. Buzza, *Phys. Chem. Chem. Phys.*, 2022, 24, 11000.
10. "F  rster Resonance Energy Transfer Rate and Efficiency in Plasmonic Nanopatch Antennas", A. O. Hamza, J.-S. G. Bouillard and **A. M. Adawi**, *ChemPhotoChem*, 2022, 6(5), e202100285.
11. "Persistent near-infrared photoconductivity of ZnO nanoparticles based on plasmonic hot charge carriers", Mohammed A. Ibrahim, Emanuele Verrelli, Fei Cheng, **Ali M. Adawi**, Jean-Sebastien G. Bouillard, and Mary O'Neill, *J. Appl. Phys.* 131, 103103 (2022).
12. "Capacitive effects and memristive switching in three terminal multilayered MoS₂ devices"
13. M. Gater, **A.M. Adawi**, N.T. Kemp, *Proceedings - IEEE International Symposium on Circuits and Systems*, 2022, 2022-May, pp. 225–229.
14. "Polarisation tuning of a H₁ organic-inorganic nano-cavity, M. M. Murshidy, **A. M. Adawi**, P. W. Fry and D. G. Lidzey, *J. App. Phys.* 129 (20), 203103 (2021).
15. "F  rster Resonance Energy Transfer and the Local Optical Density of States in Plasmonic Nanogaps" Abdullah O Hamza, Francesco N Viscomi, Jean-Sebastien G Bouillard, **Ali M Adawi**, *J. Phys. Chem. Lett.* 12, 1507-1513 (2021).
16. "Adsorption Trajectories of Non-spherical Particles at Liquid Interfaces", S.O. Morgan, J. Fox, C. Lowe, **A.M. Adawi**, J.-S.G. Bouillard, G.J. Stasiuk, T.S. Horozov, D.M.A. Buzza, *Phys. Rev. E* 103, 042604 (2021).
17. "Evidence of Nanoparticle Migration in Polymeric Hybrid Memristor Devices", A. H. Jaafar, A. Gee, A. O Hamza, C. J. Eling, J.-S. G. Bouillard, **A. M. Adawi**, N. T. Kemp, *Proceedings 2020 European Conference on Circuit Theory and Design (ECCTD)*, Sofia, Bulgaria, 2020, pp. 1-4, doi: 10.1109/ECCTD49232.2020.9218360.
18. "Water-soluble rhenium clusters with triazoles: the effect of chemical structure on cellular internalization and the DNA binding of the complexes", D. I. Konovalov, A. A. Ivanov, T. S. Frolova, I. V. Eltsov, Y. M. Gayfulin, L. Plunkett, M. Bazzar, **A. M. Adawi**, J.-S. G. Bouillard, S. I. Baiborodin, O. I. Sinitsyna, N. V. Kuratieva, V. V. Yanshole, O. A. Efremova, M. A. Shestopalov, , *Chem. Eur. J.*, chem.202001680 (2020)

19. Realisation of a sub-wavelength dimple using a 193 nm wavelength photonic nano jet", Q. A. Al-Jarwany, A. F. Mohammed, A. O. Hamza, J.-S. G. Bouillard, **A. M. Adawi**, N. Pamme, C. D. Walton, *Chemical Physics Letters*, **750**, 137400 (2020)
20. "Optical properties of nanowires based on a blend of poly (9, 9-dioctylfluorene)[PFO] and poly (9, 9-dioctyl fluorene-alt-benzothiadiazole)[F8BT]", G. E. Khalil, **A. M. Adawi**, D. G. Lidzey, *Physica E*, **118**, 113829, 2020
21. "Dynamic electric field alignment of metal-organic framework microrods", F. Cheng, A. Young, J.-S. G. Bouillard, N. Kemp, R. Guillet-Nicolas, C. Hall, D. Roberts, A. Jaafar, **A. M. Adawi**, F. Kleitz, A. Imhof, Arnout M. Reithofer, J.M. Chin, *Journal of the American Chemical Society*, **141**, 33, pp. 12989-12993 (2019)
22. "Long-term ambient air-stable cubic CsPbBr₃ perovskite quantum dots using molecular bromine", S. Thapa, K. Bhardwaj, S. Basel, S. Pradhan, C. J. Eling, **A. M. Adawi**, J.-S. G. Bouillard, G. J. Stasiuk, P. Reiss, A. Pariyar, S. Tamang, S., *Nanoscale Adv.*, **1**, 3388-3391 (2019)
23. "Probing the Molecular Orientation of a Single Conjugated Polymer via Nano-gap SERS", A. R. L. Marshall, M. Roberts, J. Gierschner, J.-S. G. Bouillard, **A. M. Adawi**, *ACS Appl. Polym. Mater.* **1**, pp. 1175-1180 (2019)
24. "Synthesis of super bright indium phosphide colloidal quantum dots through thermal diffusion", M. T. Clarke, F. Narda Viscomi, T. W. Chamberlain, N. Hondow, **A. M. Adawi**, J. Sturge, S. Erwin, J.-S. G. Bouillard, S. Tamang and G. J. Stasiuk, *Communications Chemistry* **2**, Article number 36 (2019).
25. "A label-free aptamer-based nanogap capacitive biosensor with greatly diminished electrode polarization effects", Zahra Ghobaei Namhil, Cordula Kemp, Emanuele Verrelli, Alex Iles, Nicole Pamme, **Ali M Adawi**, Neil T Kemp, *Physical Chemistry Chemical Physics*, **21**, 681, 2019
26. "From photoinduced to dark cytotoxicity via an octahedral cluster hydrolysis", E. V. Svezhentseva, Y. A. Vorotnikov, A. O. Solovieva, T. N. Pozmogova, I. V. Eltsov, A. A. Ivanov, D. V. Evtushok, S. M. Miroshnichenko, V. V. Yanshole, C. J. Eling, **A. M. Adawi**, J.-S. G. Bouillard, N. V. Kuratieva, M. S. Fufaeva, Y. V. Mironov, O. A. Efremova, M. A. Shestopalov, *Chemistry - A European Journal* **24**, 68, pp. 17915-17920 (2018)
27. "Colloidal multishell plasmonic nanoparticles: towards zero-dimensional hyperbolic metamaterial", P. Wang, A. V. Krasavin, F. N. Viscomi, **A. M. Adawi**, J.-S. G. Bouillard, L. Zhang, D. J. Roth, L. Tong, A. V. Zayats, *Laser & Photonics Reviews* **12**, 11, 1800179 (2018)
28. "Conjugated, Rod-Like Viologen Oligomers: Correlation of Oligomer Length with Conductivity and Photoconductivity", L. Chen, E. Vivier, C. J. Eling, T. Babra, J.-S. G. Bouillard, **A. M. Adawi**, D. M. Benoit, F. Hartl, H. M. Colquhoun, O. A. Efremova, B. W. Greenland, *Synth. Met.* **241**, July issue, pp 31-38 (2018)
29. Density functional theory for the crystallization of two-dimensional dipolar colloidal alloys, W. R. C. Somerville, J. L. Stokes, **A. M. Adawi**, T. S. Horozov, A. J. Archer, D. M. A. Buzza, *J. Phys.: Condens. Matter*, **2018**, **30**, 405102
30. "Crossover between liquid-like and gas-like behaviour in CH₄ at 400 K" D. Smith, M.A. Hakeem, P. Parisiades, H.E. Maynard-Casely, D. Foster, D. Eden, D.J. Bull, A.R.L. Marshall, **A.M. Adawi**, R. Howie, A. Sapelkin, V.V. Brazhkin and J.E. Proctor, *Physical Review E* **96**, 052113 (2017)
31. "Determining Molecular Orientation via Single Molecule SERS in a Plasmonic Nano-gap", Addison R. L. Marshall, Jamie Stokes, Francesco N. Viscomi, John E. Proctor, Johannes Gierschner, Jean-Sebastien Bouillard and **Ali M. Adawi**, *Nanoscale* **9**, 17415-17421 (2017).
32. "Magnetic Control of MOF Crystal Orientation and Alignment", F. Cheng, E. S. Marshall, A. J. Young, P. J. Robinson, J.-S. G. Bouillard, **A. M. Adawi**, N. A. Vermeulen, O. K. Farha, M. R. Reithofer, J. M. Chin, *Chem. Eur. J.* **23**, 62, pp 15578-15582 (2017)

33. "A Dual-Modal SERS/Fluorescence Gold Nanoparticle Probe for Mitochondrial Imaging", C. J. Eling, T. W. Price, A. R. L. Marshall, F. N. Viscomi, P. Robinson, G. Firth, **A. M. Adawi**, J-S. G. Bouillard, G. J. Stasiuk, *ChemPlusChem* 82, 674-680 (2017).
34. "Excitonic Optical Tamm States: a step towards a full molecular-dielectric photonic integration", S. Núñez-Sánchez, M. López-García, M. M. Murshidy, A. G. Abdel-Hady, M. Y. Serry, **A. M. Adawi**, J. G. Rarity, R. Oulton, W. L. Barnes, *ACS Photonics* 3,743-748(2016).
35. "Directive emission of red conjugated polymer embedded within zero index metamaterials", Tun Cao, Yang Zou, **Ali M. Adawi**, and Martin J. Cryan, *Optics Express*, 22, 22699-22706 (2014).
36. "Light emission enhancement using randomly distributed plasmonic nanoparticle arrays", J. Butkus, A.P. Edwards, F.P. Quacquarelli, **A. M. Adawi**, *Optical Materials* 36, 1502 (2014).
37. "Plasmonic nanogaps for broadband and large spontaneous emission rate enhancement" Anthony P. Edwards and **Ali M. Adawi**, *J. App. Phys.* 115, 053101 (2014).
38. "Efficient out-coupling and beaming of Tamm optical states via surface plasmon polariton excitation", M. Lopez-Garcia, Y.-L. D. Ho, M. P. C. Taverne, L.-F. Chen, M. M. Murshidy, A. P. Edwards, M. Y. Serry, **A. M. Adawi**, J. G. Rarity, and R. Oulton, *App. Phys. Lett.* 104, 231116 (2014).
39. "Micrometer and nanometer scale photopatterning of proteins on glass surfaces by photo-degradation of films formed from oligo(ethylene glycol) terminated silanes", Tizazu G, el Zubir O, Patole S, McLaren A, Vasilev C, Mothersole DJ, **Adawi A**, Hunter CN, Lidzey DG, Lopez GP, Leggett GJ, *BIOINTERPHASES* Volume: 7 Issue: 1-4 Article Number: 54 (2012).
40. "Electrical modulation of the optical properties of mid-infrared metamaterials", K. Larsen, D. Austin, I. C. Sandall, D. G. Davies, D. G. Revin, J. W. Cockburn, **A. M. Adawi**, R. J. Airey, P. W. Fry, M. Hopkinson, and L. R. Wilson, *Appl. Phys. Lett.* **101**, 25111109 (2012).
41. "Temperature dependence of the upper-branch polariton population in an organic semiconductor microcavity", D. M. Coles, P. Michetti, C. Clark, **A. M. Adawi** and D. G. Lidzey *Phys. Rev B* **84**, 205214 (2011).
42. "Spectroscopy and Single-Molecule Emission of a Fluorene-Terthiophene Oligomer", G. E. Khalil, **A. M. Adawi**, B. Robinson, A. J. Cadby, W.C. Tsoi, J-S. Kim, A. Charas, J. Morgado, and D. G. Lidzey, *J. Phys. Chem. B*, **115**, 12028–12035 (2011).
43. "Vibrationally-Assisted Polariton Relaxation Processes in Strongly-Coupled Organic Semiconductor Microcavities", David M. Coles, Paolo Michetti, Caspar Clark, Wing Chung Tsoi, **Ali M. Adawi**, Ji-Seon Kim and David G. Lidzey *Advanced Functional Materials* **21**, 3691 (2011).
44. "Ultra-fast polariton relaxation dynamics in an organic semiconductor microcavity" T. Virgili, D. Coles, **A. M. Adawi**, C. Clark, P. Michetti, S.K. Rajendran, D. Brida, D. Polli, G. Cerullo and D. G. Lidzey, *Phys. Rev B* **83**, 245309 (2011).
45. "Continuously tuneable optical filters from self-assembled block copolymer blends" A. J. Parnell, A. Pryke, O. O. Mykhaylyk, J. R. Howse, **A. M. Adawi**, N. J. Terrillf and J. Patrick A. Fairclough, *Soft matter* **7**, 3721-3725 (2011).
46. "A one-dimensional photonic-crystal nano-cavity incorporating a fluorescent molecular dye" M. M. Murshidy, **A. M. Adawi**, P. W. Fry, and D. G. Lidzey, *Appl. Phys. Lett.* **97**, 153303 (2010).
47. "Transmission properties of plasmonic metamaterial quantum cascade lasers" D. Austin, I.J. Luxmoore, P.W. Fry, **A. M. Adawi**, D.G. Revin, M.R. Soulby, J.W. Cockburn, Q. Jiang, A.B. Krysa, A.G. Cullis and L.R. Wilson, *IEEE Photonics Technol. Lett.* **22**, 1217-9 (2010).
48. "An optical nano-cavity containing a fluorescent organic dye having a high quality-factor" **A. M. Adawi**, M. M. Murshidy, P. W. Fry, and D. G. Lidzey, *ACS Nano* **4**, 3039-44 (2010).

49. "The optical properties of hybrid organic-inorganic L3 nanocavities" M. M. Murshidy, **A. M. Adawi**, P. W. Fry, D. M. Whittaker and D. G. Lidzey, J. Opt. Soc. Am. B **27**, 215 (2010).
50. "Photopatterning, Etching and Derivatization of Self-Assembled Monolayers of Phosphonic Acids on Titania" G. Tizazu, **A. M. Adawi**, G. J. Leggett and D. G. Lidzey, Langmuir, 25(18), 10746–10753 (2009).
51. "Single molecule spectroscopy of red and green-emitting fluorene-based co-polymers" G.E. Khalil, **A. M. Adawi**, A.M. Fox, A. Iraqi and D.G. Lidzey, J. Chem. Phys. **130**, 044903 (2009).
52. "Optical nanolithography using a scanning near-field probe with an integrated light source" J.W. Kingsley, S.K. Ray, **A. M. Adawi**, G.J. Leggett and D.G. Lidzey, Appl. Phys. Lett. **93**, 213103 (2008).
53. "A design for an optical-nanocavity optimized for use with a surface-bound light-emitting materials", **A. M. Adawi**, and D.G. Lidzey, New Journal of Physics **10**, 065011 (2008).
54. "Observation of the β phase in two short-chain oligofluorenes", W. C. Tsoi, A. Charas, A. J. Cadby, G. Khalil, **A. M. Adawi**, J. Morogado and D. G. Lidzey, Advanced Functional Materials **18**, 600 (2008).
55. "Enhancing the radiative decay rate of fluorescent organic molecules using micro-pillar microcavities and optical nano-cavities", **A. M. Adawi** and D.G. Lidzey, Materials Science and Engineering B **149**, 266 (2008).
56. "Organic-based micropillar structure fabrication by advanced focused ion beam milling techniques" W.C. Hung, **A. M. Adawi**, A. Cadby, L. G. Connolly, , R. Dean, A. Tahraoui, A. M. Fox, D. G. Lidzey and A. G. Cullis, Microscopy of Semiconducting Materials **120**, 449-452, 2008, proceedings of the 15th conference on Microscopy of Semiconducting Materials.
57. "Refractive index dependence of L3 photonic crystal nano-cavities," **A. M. Adawi**, A.R.A. Chalcraft, D.M. Whittaker and D.G. Lidzey, Optics Express **15**, 14299 (2007).
58. "Improving the light extraction efficiency of polymer LEDs using microcavities and photonic crystals," **A. M. Adawi**, M. Roberts, L. G. Connolly, R. Kullock, J. L. Turner, E. Smith, C. Foden, F. Qureshi, N. Athanassopoulou, D. M. Whittaker and David G. Lidzey, Proc. SPIE Organic Light Emitting Materials and Devices XI 6655, 665510 (2007).
59. "Improving light extraction efficiency of polymeric light emitting diodes using two-dimensional photonic crystals", **A. M. Adawi**, R. Kullock, J. L. Turner, C. Vasilev and D. G. Lidzey, A. Tahraoui, D. Gibson, E. Smith, C. Foden, M. Roberts, F. Qureshi, C. Hilsum and N. Athanassopoulou, Organic Electronics **7**, 222 (2006).
60. "Improving the light extraction efficiency of red-emitting conjugated-polymer light emitting diodes", **A. M. Adawi**, L.G. Connolly, D.M. Whittaker, D.G. Lidzey, E. Smith, M. Roberts, F. Qureshi, C. Hilsum and N. Athanassopoulou, J. Appl. Phys. **99**, 054505-1 (2006).
61. "Intra-valence band transitions in self-assembled InAs/GaAs quantum dots studied using photocurrent spectroscopy", E.A. Zibik, **A. M. Adawi**, L.R. Wilson, A. Lemaitre, J.W. Cockburn, M. Hopkinson and G. Hill, J. Appl. Phys. **100**, 013106 (2006).
62. "Spontaneous-emission control in micro-pillar cavities containing a fluorescent molecular dye", **A. M. Adawi**, A. Cadby, L. G. Connolly, W.C. Hung, R. Dean, A. Tahraoui, A. M. Fox, A. G. Cullis, D. Sanvitto, M. S. Skolnick, & D. G. Lidzey, Advanced Materials **18**, 742 (2006).
63. "An organic two dimensional photonic crystal microcavity prosscessed by focused ion beam milling", W.C. Hung, **A. M. Adawi**, R. Dean, A. Cadby, L.G. Connolly, A. Tahraoui, D.G. Lidzey, A.G. Cullis, Microscopy of Semiconducting Materials **107**, 427-431, 2005, proceedings of the 14th conference on Microscopy of Semiconducting Materials, April 11-14, 2005, Oxford, UK.
64. "Dynamics of stimulated emission in InAs quantum dot laser structures measured in pump-probe experiments", A.I. Tartakovskii , K.M. Groom, **A. M. Adawi**, A. Lemaitre, D.J. Mowbray, M.S. Skolnick, M. Hopkinson, Ultrafast phenomena in semiconductors and nanostructure

materials VIII, Proceedings of the society of photo-optical instrumentation engineers(SPIE) **5352**, 348-354 (2004).

65. "Observation of in-plane polarized intersublevel absorption in strongly coupled InGaAs/GaAs self assembled quantum dots", **A. M. Adawi**, E.A. Zibik, L.R. Wilson, A. Lemaitre, W.D. Sheng, J.W. Cockburn M.S. Skolnick, J.P. Leburton, M. Hopkinson G. Hill, S.L. Liew and A.G. Cullis, Phys. Stat. sol.(b) **238**, 341 (2003).
66. "Strong coupling in high-finesse organic semiconductor microcavities", L.G. Connolly, D.G. Lidzey, R. Butté, **A. M. Adawi**, D.M. Whittaker, M.S. Skolnick and R. Airey, Appl. Phys. Lett. **83**, 5377 (2003).
67. "Strong in-plane polarized intraband absorption in vertically aligned InGaAs/GaAs quantum dots", **A. M. Adawi**, E.A. Zibik, L.R. Wilson, A. Lemaitre, J.W. Cockburn, M.S. Skolnick, M. Hopkinson, G. Hill, S.L. Liew, and A.G. Cullis, Appl. Phys. Lett. **82**, 3415 (2003).
68. "Comparison of intraband absorption and photocurrent in InAs/GaAs quantum dots", **A. M. Adawi**, E.A. Zibik, L.R. Wilson, A. Lemaitre, J.W. Cockburn, M.S. Skolnick, M. Hopkinson and G. Hill, Appl. Phys. Lett. **83**, 602 (2003).
69. "Dynamics of stimulated emission in InAs quantum-dot laser structures measured in pump-probe experiments", A.I. Tartakovskii, K.M. Groom, **A. M. Adawi**, A. Lemaitre, A.M. Fox, D.J. Mowbray, M.S. Skolnick and M. Hopkinson, Appl. Phys. Lett. **81**, 4118 (2002).
70. "Inversion of the intersublevel optical selection rule in strongly coupled InGaAs/GaAs self assembled quantum dots", **A. M. Adawi**, E.A. Zibik, L.R. Wilson, A. Lemaitre, W.D. Sheng, J.W. Cockburn, M.S. Skolnick, J.P. Leburton, M.J. Steer, M. Hopkinson, G. Hill, S.L. Liew, and A.G. Cullis, Proceeding of the 26th International Conference on the Physics of Semiconductors (ICPS), Edinburgh 2002.
71. "Dynamics of stimulated emission and gain saturation in InAs quantum dots amplifiers", A.I. Tartakovskii, K.M. Groom, **A. M. Adawi**, A. Lemaitre, D.J. Mowbray, M.S. Skolnick and M. Hopkinson, Proceeding of the 26th International Conference on the Physics of Semiconductors (ICPS), Edinburgh 2002.
72. "Interplay of order and disorder in the optical properties of opal photonic crystals", V.N. Astratov, **A. M. Adawi**, S. Fricker, M.S. Skolnick, D.M. Whittaker, and P.N. Pusey, Phys. Rev. B **66**, 165215 (2002).