

Recent Publications – Faculty of Science, Technology, Engineering and Mathematics

BY MEMBERS OF THE STAFF AND BY RESEARCH STUDENTS WORKING UNDER THEIR SUPERVISION

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School of Biochemistry and Immunology

BIOCHEMISTRY

- Creagh, Emma**, 'Caspase-4: a therapeutic target for peptic ulcer disease', *Immunohorizons*, 4, 10 (2021), 627-633 [Z. Zaslona, E. Flis, C. Nulty (...), L.A.J. O'Neill, E.M. Creagh]
- 'Characterizing caspase-1 involvement during esophageal disease progression', *Cancer Immunology Immunotherapy*, 69, 12 (2020), 2635-2649 [G. Barber, A. Anand, K. Oficjalska (...), J. O'Sullivan, E.M. Creagh.]
- 'Regulation, activation and function of caspase-11 during health and disease', *International Journal of Molecular Science*, 22, 4 (2021), 1506 [A. Agnew, C. Nulty, E.M. Creagh]
- Cunningham, Colm**, 'Acute inflammation alters brain energy metabolism in mice and humans: role in suppressed spontaneous activity, impaired cognition, and delirium', *Journal of Neuroscience* (2020), 10.1523/JNEUROSCI.2876-19.2020 [Kealy]
- 'Reactive astrocyte nomenclature, definitions, and future directions', *Nature Neuroscience*, 24, 3 (2021), 312-325 [C. Escartin, E. Galea, A. Lakatos, M.V. Sofroniew, A. Verkhratsky]
- 'Double stranded RNA drives anti-viral innate immune responses, sickness behavior and cognitive dysfunction dependent on dsRNA length, IFNAR1 expression and age', *Brain, Behavior, and Immunity*, 95 (2021), 413-428 [N. McGarry, C.L. Murray, S. Garvey (...), K.J. Mitchell, C. Cunningham]
- 'Acute neuroinflammation, sickness behavior and working memory responses to acute systemic LPS challenge following noradrenergic lesion in mice', *Brain, Behavior, and Immunity*, 94 (2021), 357-368 [E. O'Neill, R. O'Sullivan, C. Murray (...), A. Harkin, C. Cunningham]
- 'Macrophages in the cochlea: an immunological link between risk factors and progressive hearing loss', *GLIA*, 70, 2 (2022), 219-238 [K. Hough, C.A. Verschuur, C. Cunningham, T.A. Newman]
- 'Acute systemic inflammation exacerbates neuroinflammation in Alzheimer's disease: IL-1 β drives amplified responses in primed astrocytes and neuronal network dysfunction', *Alzheimer's and Dementia*, 17, 10 (2021), 1735-1755 [A.B. Lopez-Rodriguez, E. Hennessy, C.L. Murray, M.O. Cunningham, C. Cunningham]
- Davey, Gavin**, 'Mitochondrial arginase-2 is essential for IL-10 metabolic reprogramming of inflammatory macrophages', *Nature Communications*, 12, 1 (2021), 1460 [J.K. Dowling, R. Afzal, L.J. Gearing (...), G.P. Davey *et al.*]
- 'Complex I controls mitochondrial and plasma membrane potentials in nerve terminals', *Neurochemical Research* (2020), <http://dx.doi.org/10.1007/s11064-020-02990-8> [S.M. Kilbride, J.E. Telford, G.P. Davey]

Recent publications – Faculty of Science, Technology, Engineering and Mathematics

- ' β -naphthoflavone and ethanol reverse mitochondrial dysfunction in a Parkinsonian model of neurodegeneration', *International Journal of Molecular Sciences* (2020), <http://dx.doi.org/10.3390/ijms21113955> [J.F. Abascal, E. Chiaino, M. Frosini, G.P. Davey, Valotij]
- 'Degradation of thymic humoral factor $\gamma 2$ in human, rat and mouse blood: an experimental and theoretical study', *BBA - Proteins and Proteomics* (2020), <http://dx.doi.org/10.1016/j.bbapap.2020.140467> [M. Martignoni, M. Benedetti, G.P. Davey, K.F. Tipton, A. McDonald]
- 'Simulating the enzymes of ganglioside biosynthesis with glycologue', *Beilstein Journal of Organic Chemistry* (2021), doi.org/10.3762/bjoc.17.64 [A.G. McDonald, G.P. Davey]
- '2-dimensional ultra-high performance liquid chromatography and DMT-MM derivatization paired with tandem mass spectrometry for comprehensive serum N-glycome characterization', *Analytica Chimica Acta*, 1179, 338840 (2021), doi.org/10.1016/j.aca.2021.338840 [J. Smith, S. Millán-Martín, S. Mittermayr (...), G. Davey *et al.*]
- 'Monitoring the sialome on human immune cells', *Methods Mol Biol*, 2370 (2021), 323-329 [L.K. O'Farrell, A.D. Fraser, G.P. Davey]
- 'Metabolic labeling of primary neurons using carbohydrate click chemistry', *Methods Mol Biol*, (2021), 315-322 [J.M. Hayes, D.M. O'Hara, G.P. Davey]
- 'O-glycologue: a formal-language-based generator of O-glycosylation networks', *Methods Mol Bio*, 2370 (2021), 223-236 [A.G. McDonald, G.P. Davey]
- Fayne, Darren**, 'Synthesis and antiproliferative evaluation of 3-chloroazetidin-2-ones with antimetabolic activity: heterocyclic bridged analogues of combretastatin A-4', *Pharmaceuticals*, 14, 11 (2021), art. 1119 [A.M. Malebari, S. Wang, T.F. Greene (...), D. Fayne *et al.*]
- Finlay, David**, 'TGF β drives NK cell metabolic dysfunction in human metastatic breast cancer', *Journal for Immunotherapy of Cancer*, 9, 2 (2021), <http://hdl.handle.net/2262/95711> [K. Slattery, E. Woods, V. Zaiatz-Bittencourt (...), D.K. Finlay, C.M. Gardiner]
- 'Fructose reprogrammes glutamine-dependent oxidative metabolism to support LPS-induced inflammation', *Nature Communications*, 12, 12 (2021), 1209 [N. Jones, J. Blagih, F. Zani (...), D.K. Finlay *et al.*]
- 'Mitochondrial arginase-2 is essential for IL-10 metabolic reprogramming of inflammatory macrophages', *Nature Communications*, 12, 1 (2021), 1460 [J.K. Dowling, R. Afzal, L.J. Gearing (...), D.K. Finlay *et al.*]
- 'Metabolic requirements of NK cells during the acute response against retroviral infection', *Nature Communications*, 12, 1 (2021), 5373 [E. Littwitz-Salomon, D. Moreira, J.N. Frost (...), U. Dittmer, D.K. Finlay]
- 'Specific human cytomegalovirus signature detected in NK cell metabolic changes post vaccination', *NPJ Vaccines*, 6, 1 (2021), 112 [E. Woods, V. Zaiatz-Bittencourt, C. Bannan (...), D.K. Finlay *et al.*]
- 'Cytokine-induced natural killer cell training is dependent on cellular metabolism and is defective in obesity', *Blood Advances*, 5, 21 (2021), 4447-4455 [N. Kedia-Mehta, L. Tobin, V. Zaiatz-Bittencourt (...), D.K. Finlay, A.E. Hogan]
- Ghanim, Magda**, 'A non-toxic, reversibly released imaging probe for oral cancer that is derived from natural compounds', *Scientific Reports* (2021), <http://hdl.handle.net/2262/98094> [M. Ghanim, N. Relitti, G. McManus (...), K.H. Mok, V.P. Kelly]
- Kelly, Vincent**, 'A non-toxic, reversibly released imaging probe for oral cancer that is derived from natural compounds', *Scientific Reports* (2021), <http://hdl.handle.net/2262/98094> [M. Ghanim, N. Relitti, G. McManus (...), K.H. Mok, V.P. Kelly]
- 'The human tRNA-guanine transglycosylase displays promiscuous nucleobase preference but strict tRNA specificity', *Nucleic Acids Research* (2021), 4877-4890 [C. Fergus, M. Al-Qasem, M. Cotter (...), S.J. Connon, V.P. Kelly]

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- 'CRISPR/Cas9-mediated SARM1 knockout and epitope-tagged mice reveal that SARM1 does not regulate nuclear transcription, but is expressed in macrophages', *Journal of Biological Chemistry*, 297, 6 (2021), <http://hdl.handle.net/2262/98093> [C.G. Doran, R. Sugisawa, M. Carty (...), K.P. Vincent, A.G. Bowie]
- 'De-novo designed β -lysine derivatives can both augment and diminish the proliferation rates of *E. coli* through the action of elongation factor P', *Bioorganic and Medicinal Chemistry Letters*, 59, 128545 (2022), <https://doi.org/10.1016/j.bmcl.2022.128545> [C.M. McDonnell, M. Ghanim, J.M. Southern, V.P. Kelly, S.J. Connon]
- 'Next generation SARM1 knockout and epitope tagged CRISPR-Cas9-generated isogenic mice reveal that SARM1 does not participate in regulating nuclear transcription, despite confirmation of protein expression in macrophages', *bioRxiv* (2021), <http://hdl.handle.net/2262/98092> [C.G. Doran, R. Sugisawa, M. Carty (...), V.P. Kelly, A.G. Bowie]
- Loane, David**, 'Acute colitis during chronic experimental traumatic brain injury in mice induces dysautonomia and persistent extraintestinal, systemic, and CNS inflammation with exacerbated neurological deficits', *Journal of Neuroinflammation*, 18, 1 (2021), <http://dx.doi.org/10.1186/s12974-020-02067-x> [M. Hanscom, D.J. Loane, T. Aubretch (...), T. Shea-Donohue, A.I. Faden]
- 'Microglial depletion with CSF1R inhibitor during chronic phase of experimental traumatic brain injury reduces neurodegeneration and neurological deficits', *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 40, 14 (2020), 2960-2974 [R.J. Henry, R.M. Ritze, J.P. Barrett (...), A.I. Faden, D.J. Loane]
- 'Enhanced Akt/GSK-3 β /CREB signaling mediates the anti-inflammatory actions of mGluR5 positive allosteric modulators in microglia and following traumatic brain injury in male mice', *Journal of Neurochemistry* (2020), <http://dx.doi.org/10.1111/jnc.14954> [S.A. Bhat, R.J. Henry, A.C. Blanchard (...), D.J. Loane, A.I. Faden]
- 'Interferon- β plays a detrimental role in experimental traumatic brain injury by enhancing neuroinflammation that drives chronic neurodegeneration', *Journal of Neuroscience*, 40, 10 (2020), 2357-2370 [J.P. Barrett, R.J. Henry, K.A. Shirey (...), B.A. Stoica, D.J. Loane]
- 'Delayed microglial depletion after spinal cord injury reduces chronic inflammation and neurodegeneration in the brain and improves neurological recovery in male mice', *Theranostics* (2020), <http://dx.doi.org/10.7150/thno.49199> [Y. Li, R.M. Ritzel, N. Khan (...), D.J. Loane *et al.*]
- 'The need to incorporate aged animals into the preclinical modeling of neurological conditions', *Neuroscience and Biobehavioral Reviews*, 109 (2020), 114-128 [M. Sun, S.J. McDonald, R.D. Brady (...), D.J. Loane, S.R. Shultz]
- 'Traumatic brain injury induces cGAS activation and type I interferon signaling in aged mice', *Frontiers in Immunology* (2021), <http://dx.doi.org/10.3389/fimmu.2021.710608> [J.P. Barrett, S.M. Knobloch, S. Bhattacharya, H. Gordish-Dressman, B.A. Stoica, D.J. Loane]
- 'Targeting chronic and evolving neuroinflammation following traumatic brain injury to improve long-term outcomes: insights from microglial-depletion models', *Neural Regeneration Research* (2021), <http://dx.doi.org/10.4103/1673-5374.297068> [R.J. Henry, D.J. Loane]
- 'Pre-clinical common data elements for traumatic brain injury research: progress and use cases', *Journal of Neurotrauma* (2021), <http://dx.doi.org/10.1089/neu.2020.7328> [M.C. LaPlaca, J.R. Huie, H.B. Alam (...), S.H. Friess, L.J. Zai]
- McDonald, Andrew**, '6-hydroxydopamine: a far from simple neurotoxin', *Journal of Neural Transmission*, 127 (2020), 213-230 [D. Varešljija, K.F. Tipton, G.P. Davey, A.G. McDonald]
- McManus, Gavin**, 'A non-toxic, reversibly released imaging probe for oral cancer that is derived from natural compounds', *Scientific Reports* (2021), <http://hdl.handle.net/2262/98094> [M. Ghanim, N. Relitti, G. McManus (...), K.H. Mok, V.P. Kelly]
- Mok, Kenneth**, 'A non-toxic, reversibly released imaging probe for oral cancer that is derived from natural compounds', *Scientific Reports* (2021), <http://hdl.handle.net/2262/98094> [M. Ghanim, N. Relitti, G. McManus (...), K.H. Mok, V.P. Kelly]

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- 'The *Trypanosoma brucei* KIFC1 kinesin ensures the fast antibody clearance required for parasite infectivity', *iScience*, 23, 9 (2020), 101476 [L. Lecordier, S. Uzureau, G. Vanwalleghem (...), D.P. Nolan, E. Pays]
- 'Genetic and immunological basis of human African trypanosomiasis', *Current Opinion in Immunology*, 72 (2021), 13-20 [E. Pays, D.P. Nolan]
- Porter, Richard**, 'Pro-inflammatory stimulation of monocytes by ANCA is linked to changes in cellular metabolism', *Frontiers in Medicine (Rheumatology)*, 7(2020), 553 [E.C. O'Brien, C.A. White, J. Wyse (...), R.K. Porter et al.]
- 'Effect of dietary restriction and subsequent realimentation on hepatic oxidative phosphorylation in cattle', *Animal* (2021), 100009 [K. Keogh, C. McKenna, R.K. Porter, S.M. Waters, D.A. Kenny]
- Zisterer, Daniela**, 'Exploring the anti-cancer mechanism of novel 3,4'-substituted diaryl guanidinium derivatives', *Pharmaceuticals (Basel)*, 13, 12 (2020), 485 [V. Previtali, H.B. Mihigo, R. Amet, A.M. McElligott, D.M. Zisterer, I. Rozas]
- 'A novel aryl-guanidinium derivative, VP79s, targets the signal transducer and activator of transcription 3 signaling pathway, downregulates myeloid cell leukaemia-1 and exhibits preclinical activity against multiple myeloma', *Life Sciences*, 290 (2022), <http://hdl.handle.net/2262/97864> [R. Amet, V. Previtali, H.B. Mihigo (...), A.M. McElligott, D.M. Zisterer]
- 'Synthesis and antiproliferative evaluation of 3-chloroazetidin-2-ones with antimetabolic activity: heterocyclic bridged analogues of combretastatin A-4', *Pharmaceuticals*, 14, 11 (2021), 1119 [A.M. Malebari, S. Wang, T.F. Greene (...), D.M. Zisterer, M.J. Meegan]

IMMUNOLOGY

- Bowie, Andrew**, 'SARM1 deficiency promotes rod and cone photoreceptor cell survival in a model of retinal degeneration', *Life Science Alliance*, 3, 5 (2020), <http://hdl.handle.net/2262/95319> [E. Ozaki, L. Gibbons, N.G.B. Neto (...), A. Bowie, S.L. Doyle]
- 'Detection of viral infections by innate immunity', *Biochemical Pharmacology*, 183 (2021), 114316 [M. Carty, C. Guy, A.G. Bowie]
- 'Malaria parasites both repress host CXCL10 and use it as a cue for growth acceleration', *Nature Communications*, 12, 1 (2021), 4851 [Y. Ofir-Birin, H. Ben Ami Pilo, A. Cruz Camacho (...), A.G. Bowie, N. Regev-Rudzki]
- 'CRISPR/Cas9-mediated SARM1 knockout and epitope-tagged mice reveal that SARM1 does not regulate nuclear transcription, but is expressed in macrophages', *Journal of Biological Chemistry*, 297, 6 (2021), <http://hdl.handle.net/2262/98093> [C.G. Doran, R. Sugisawa, M. Carty (...), V.P. Kelly, A.G. Bowie]
- 'SARM1 ablation is protective and preserves spatial vision in an in vivo mouse model of retinal ganglion cell degeneration', *International Journal of Molecular Sciences* (2022), <http://hdl.handle.net/2262/98254> [L.K. Finnegan, N. Chadderton, P.F. Kenna (...), A.G. Bowie et al.]
- 'Candidate role for toll-like receptor 3 L412F polymorphism and infection in acute exacerbation of idiopathic pulmonary fibrosis', *American Journal of Respiratory and Critical Care Medicine* (2022), <http://dx.doi.org/10.1164/rccm.202010-3880oc> [A.N. McElroy, R. Invernizzi, J.W. Laskowska, N. Hirani, M.E. Armstrong, S.C. Donnelly]
- 'Myeloid cell nuclear differentiation antigen controls the pathogen-stimulated type I interferon cascade in human monocytes by transcriptional regulation of IRF7', *Nature Communications*, 13, 1 (2022), 14 [L. Gu, D. Casserly, G. Brady (...), L. Unterholzner, A.G. Bowie]
- Carty, Michael**, 'SARM1 deficiency promotes rod and cone photoreceptor cell survival in a model of retinal degeneration', *Life Science Alliance*, 3, 5 (2020), <http://hdl.handle.net/2262/95319> [E. Ozaki, L. Gibbons, N.G.B. Neto (...), M. Carty et al.]

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- 'Detection of viral infections by innate immunity', *Biochemical Pharmacology*, 183 (2021), 114316 [M. Carty, C. Guy, A.G. Bowie]
- 'CRISPR/Cas9-mediated SARM1 knockout and epitope-tagged mice reveal that SARM1 does not regulate nuclear transcription, but is expressed in macrophages', *Journal of Biological Chemistry*, 297, 6 (2021), <http://hdl.handle.net/2262/98093> [C.G. Doran, R. Sugisawa, M. Carty (...), V.P. Kelly, A.G. Bowie]
- 'SARM1 ablation is protective and preserves spatial vision in an in vivo mouse model of retinal ganglion cell degeneration', *International Journal of Molecular Sciences* (2022), <http://hdl.handle.net/2262/98254> [L.K. Finnegan, N. Chadderton, P.F. Kenna (...), M. Carty *et al.*]
- Lavelle, Edward**, 'Mitochondrial arginase-2 is essential for IL-10 metabolic reprogramming of inflammatory macrophages', *Nature Communications*, 12, 1 (2021), 1460 [J.K. Dowling, R. Afzal, L.J. Gearing (...), E.C. Lavelle *et al.*]
- 'Publisher correction: mucosal vaccines - fortifying the frontiers', *Nature Reviews Immunology* (2021), <http://dx.doi.org/10.1038/s41577-021-00599-8> [E.C. Lavelle, R.W. Ward]
- 'Mucosal vaccines - fortifying the frontiers', *Nature Reviews Immunology* (2021), <http://dx.doi.org/10.1038/s41577-021-00583-2> [E.C. Lavelle, R.W. Ward]
- 'Chitin-derived polymer deacetylation regulates mitochondrial reactive oxygen species dependent cGAS-STING and NLRP3 inflammasome activation', *Biomaterials*, 275, 120961 (2021), <http://dx.doi.org/10.1016/j.biomaterials.2021.120961> [J.L. Turley, H.B.T. Moran, C.P. McEntee (...), M. Andersson, E.C. Lavelle]
- 'Type II NKT cell agonist, sulfatide, is an effective adjuvant for oral heat-killed cholera vaccines', *Vaccines*, 9, 6 (2021), <http://hdl.handle.net/2262/97153> [A. Albutti, S. Longet, C.P. McEntee (...), S. Cardell, E.C. Lavelle]
- 'Interleukin-33 regulates metabolic reprogramming of the retinal pigment epithelium in response to immune stressors', *JCI Insight*, 6, 8 (2021), <http://hdl.handle.net/2262/97154> [L.M. Scott, E.E. Vincent, N. Hudson (...), E.C. Lavelle *et al.*]
- 'Immuno-modulatory biomaterials as anti-inflammatory therapeutics', *Biochemical Pharmacology*, 197 (2022), 114890 [R.I. Lynch, E.C. Lavelle]
- 'Promotion of trained innate immunity by nanoparticles', *Seminars in Immunology* (2021), 101542 [N. Muñoz-Wolf, E.C. Lavelle]
- 'Fatballs foster fabulous follicles', *Immunity*, 54, 12 (2021), 2695-2697 [J.L. Turley, E.C. Lavelle]
- McLoughlin, Rachel**, 'The immune response in bovine primary dermal fibroblasts is influenced by interleukin 8 promoter haplotype and vitamin D', *Veterinary Immunology and Immunopathology*, 238 (2021), 110291 [M.B. O'Brien, C.L. Beynon, R.M. McLoughlin, K.G. Meade]
- Mills, Kingston**, 'Helminth imprinting of hematopoietic stem cells sustains anti-inflammatory trained innate immunity that attenuates autoimmune disease', *Journal of Immunology*, 206, 7 (2021), 1618-1630 [K. Cunningham, C. Finlay, K.H. Mills]
- 'IL-17 mediates protective immunity against nasal infection with *Bordetella pertussis* by mobilizing neutrophils, especially Siglec-F⁺ neutrophils', *Mucosal Immunology* (2021), <http://hdl.handle.net/2262/97209> [L. Borkner, L.M. Curham, M.M. Wilk, B. Moran, K.H.G. Mills]
- 'Trained innate immunity in hematopoietic stem cell and solid organ transplantation', *Transplantation* (2021), <http://dx.doi.org/10.1097/tp.0000000000003673> [K.T. Cunningham, K.H.G. Mills]
- 'Correction: IL-17 mediates protective immunity against nasal infection with *Bordetella pertussis* by mobilizing neutrophils, especially Siglec-F⁺ neutrophils (*Mucosal Immunology*, (2021), 14, 5, (1183-1202), 10.1038/s41385-021-00407-5)', *Mucosal Immunology*, 14, 5 (2021), 1218-1219 [L. Borkner, L.M. Curham, M.M. Wilk, B. Moran, K.H.G. Mills]

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'The effects of trained innate immunity on T cell responses; clinical implications and knowledge gaps for future research', *Frontiers in Immunology*, 12, 706583 (2021), <http://hdl.handle.net/2262/97208> [D.M. Murphy, K.H.G. Mills, S.A. Basdeo]

'Sex differences regulate immune responses in experimental autoimmune encephalomyelitis and multiple sclerosis', *European Journal of Immunology*, 52, 1 (2022), 24-33 [L. Ryan, K.H.G. Mills]

Moran, Barry, 'Optimisation and comparison of orthogonal methods for separation and characterisation of extracellular vesicles to investigate how representative infant milk formula is of milk', *Food Chemistry*, 353 (2021), 129309 [A. Mukhopadhyaya, J. Santoro, B. Moran, Z. Useckaite, L. O'Driscoll]

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Sheedy, Frederick, 'Regulating metabolic inflammation by nutritional modulation', *Journal of Allergy and Clinical Immunology*, 146, 4 (2020), 706-720 [H. Charles-Messance, K.A.J. Mitchelson, E. De Marco Castro, F.J. Sheedy, H.M. Roche]

'Phagocyte metabolism: neutrophils have their cake but don't eat it', *Trends in Immunology* (2021), <http://dx.doi.org/10.1016/j.it.2021.08.011> [J.J. Phelan, F.J. Sheedy]

School of Chemistry

Boland, John, 'Crystallographically controlled synthesis of SnSe nanowires: potential in resistive memory devices', *Advanced Materials Interfaces*, 10, 16 (2020), 2000474 10. [F. Davitt, H.G. Manning, F. Robinson (...), J.J. Boland *et al.*]

'Sampling, identification and characterization of microplastics release from polypropylene baby feeding bottle during daily use', *Journal of Visualized Experiments: Jove*, 173 (2021), <http://hdl.handle.net/2262/97910> [D. Li, L. Yang, R. Kavanagh (...), J.J. Boland, J.J. Wang]

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'Stretching the equilibrium limit of Sn in Ge_{1-x}Sn_x nanowires: implications for field effect transistors', *ACS Applied Nano Materials*, 4, 2 (2021), 1048-1056 [S. Biswas, J. Doherty, E. Galluccio (...), J.J. Boland, J.D. Holmes]

'Tuning the electro-optical properties of nanowire networks', *Nanoscale*, 13 (2021), 15367-15379 [K. Esteki, H.G. Manning, E. Sheerin, M.S. Ferreira, J.J. Boland, C.G. Rocha]

'Real-world natural passivation phenomena can limit microplastic generation in water', *Chemical Engineering Journal*, 428, 132466 (2022), <http://dx.doi.org/10.1016/j.cej.2021.132466> [Y. Shi, D. Li, L. Xiao (...), J.J. Boland, J.J. Wang]

Duesberg, Georg, 'Suppression of the metal-insulator transition in magnetron sputtered Ti₂O₃ films', *Thin Solid Films*, 694 (2020), <http://hdl.handle.net/2262/91314> [P.V. Shvets, D. Caffrey, K. Fleischer (...), G.S. Duesberg *et al.*]

'Production and processing of graphene and related materials', *2D Materials*, 7, 2 (2020), <http://dx.doi.org/10.1088/2053-1583/ab1e0a> [C. Backes, A.M. Abdelkader, C. Alonso (...), A.C. Ferrari, M. Garcia-Hernandez]

'Tuning the photo-electrochemical performance of Ru^{III}-sensitized two-dimensional MoS₂', *Chemistry - A European Journal* (2021), <http://dx.doi.org/10.1002/chem.202002615> [X. Chen, A.M. Krajewska, C. McGuinness (...), G. Duesberg *et al.*]

'Electronic and structural characterisation of polycrystalline platinum disulfide thin films', *RSC Advances*, 10 (2020), 42001-42007 [K. Zhussupbekov, C.P. Cullen, A. Zhussupbekova, I.V. Shvets, G.S. Duesberg, N. McEvoy]

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- 'Imaging and identification of point defects in PtTe₂', *NPJ 2D Materials and Applications*, 5, 14 (2021), <http://hdl.handle.net/2262/94763> [K. Zhussupbekov, L. Ansari, J.B. McManus (...), G.S. Duesberg *et al.*]
- 'Large-area integration of two-dimensional materials and their heterostructures by wafer bonding', *Nature Communications*, 12, 1 (2021), <http://hdl.handle.net/2262/96326> [A. Quellmalz, X. Wang, S. Sawallich (...), G.S. Duesberg *et al.*]
- 'Slippery polymer monoliths: surface functionalization with ordered MoS₂ microparticle arrays', *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 617, 126363 (2021), <http://hdl.handle.net/2262/96328> [W. Han, S. Luo, M. Haase, G.S. Duesberg, M. Steinhart]
- 'Hydrogenation of diamond nanowire surfaces for effective electrostatic charge storage', *Nanoscale*, 13, 15 (2021), 7308-7321 [K. Panda, J-E. Kim, K.J. Sankaran (...), G.S. Duesberg, J.Y. Park]
- 'Synthesis and characterisation of thin-film platinum disulfide and platinum sulfide', *Nanoscale*, 13, 15 (2021), 7403-7411 [C.P. Cullen, O. Hartwig, D. McCloskey, G.S. Duesberg, N. McEvoy]
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