

PAPERS IN PRIMARY JOURNALS

Papers currently under review: 1

2018

- 89 The influence of oxygen on the surface interaction between CO₂ and copper studied by ambient pressure X-ray photoelectron spectroscopy
A. Regoutz, G. Kerherve, I. Villar-Garcia, C.K. Williams, D.J. Payne, *Surface Science*, accepted (2018).
- 88 Role of spin-orbit coupling in the electronic structure of IrO₂
P.K. Das, J. Slawinska, I. Vobornik, J. Fujii, A. Regoutz, J.M. Kahk, D.O. Scanlon, B.J. Morgan, C. McGuinness, E. Plekhanov, D. Di Sante, Y.-S. Huang, R.-S. Chen, G. Rossi, S. Picozzi, W.R. Branford, G. Panaccione, D.J. Payne, *Physical Review Materials*, accepted (2018).
- 87 Direct measurement of Ni incorporation into Fe₃O₄(001)
P.T.P. Ryan, Z. Jakub, J. Balajka, J. Hulva, M. Meier, J.T. Kuchle, P.J. Blowey, P. Thakur Kumar, C. Franchini, D.J. Payne, D.P. Woodruff, L.A. Rochford, F. Allegretti, T. -L. Lee, G.S. Parkinson and D.A. Duncan, *Physical Chemistry Chemical Physics*, accepted (2018).
- 86 Revisiting the origin of satellites in core-level photoemission of transparent conducting oxides: The case of *n*-doped SnO₂
F. Borgatti, J.A. Berger, D. Ceolin, J. Sky Zhou, J.J. Kas, M. Guzzo, C.F. McConville, F. Offi, G. Panaccione, A. Regoutz, D.J. Payne, J.-P.l Rueff, O. Bierwagen, M.E. White, J.S. Speck, M. Gatti, R.G. Egdell, *Physical Review B*, accepted (2018).
- 85 Tailoring SOFC electrode microstructures for improved performance
P.A. Connor, X. Yue, C.D. Savaniu, R. Price, G. Triantafyllou, M. Cassidy, G. Kerherve, D.J. Payne, R.C. Maher, L. F. Cohen, R.I. Tomov, B.A. Glowacki, R.V. Kumar, J.T.S. Irvine *Advanced Energy Materials*, accepted (2018).
- 84 The reduction properties of M-doped (M=Zr, Gd) CeO₂/YSZ scaffolds co-infiltrated with nickel
R.C. Maher, G. Kerherve, D.J. Payne, X. Yue, P.A. Connor, J.T.S. Irvine, L. F. Cohen D.J. Payne, *Energy Technology*, accepted (2018).
- 83 A “cleanroom-free” and scalable manufacturing technology for the microfluidic generation of lipid-stabilized droplets and cell-sized multisomes
T. Trantidou, A. Regoutz, X. Ning Voon, D.J. Payne, Oscar Ces, *Sensors and Actuators B*, accepted (2018).
- 82 Lead Acid Battery Recycling for the 21st Century
A. Ballantyne, J. Hallett, D.J. Riley, N.S. Shah, D.J. Payne, *Open Science*, accepted (2018).
- 81 Synergy effect of cobalt oxide and Gd-CeO₂ dual infiltration in LSCF/CGO cathodes.
R. I. Tomov, T. B. Mitchel-Williams, R. Maher, G. Kerherve, L. Cohen, D.J. Payne, R.V. Kumar, and B.A. Glowacki, *Journal of Materials Chemistry A*, accepted (2018).
- 80 NASICON LiM₂(PO₄)₃ electrolyte (M 1/4 Zr) and 5 electrode (M 1/4 Ti) materials for all solid-state Li-ion batteries with high total conductivity and low interfacial resistance.
H. El-Shinawi, A. Regoutz, D.J. Payne, E.J. Cussen and S.A. Corr, *Journal of Materials Chemistry A*, accepted (2018).

- 79 Copper (I) Selenocyanate (CuSeCN) as a Novel Hole-Transport Layer for Transistors, Organic Solar Cells and Light-Emitting Diodes.
N. Wijeyasinghe, L. Tsetseris, A. Regoutz, W.-Y. Sit, Z. Fei, T. Du, X. Wang, M.A. McLachlan, G. Vourlias, P.A. Patsalas, D.J. Payne, M. Heeney, and T.D. Anthopoulos, *Advanced Functional Materials*, accepted (2018).
- 78 Crystal structure and surface characteristics of Sr-doped GdBaCo₂O₆ d double perovskites: oxygen evolution reaction and conductivity.
S.S. Pramana, A. Cavallaro, C. Li, A. D. Handoko, K.W. Chan, R.J. Walker, A. Regoutz, J.S. Herrin, B.S. Yeo, D.J. Payne, J.A. Kilner, M.P. Ryan, S.J. Skinner. *Journal of Materials Chemistry A*, accepted (2018).

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- 76 Sub-second photonic processing of solution-deposited single layer and heterojunction metal oxide thin-film transistors using a high-power xenon flash lamp.
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- 74 Scalable high-affinity stabilization of magnetic iron oxide nanostructures by a biocompatible antifouling homopolymer.
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A. García-Trenco, A. Regoutz, E.R.White, D.J. Payne, M.S.P. Shaffer, C.K.Williams, *Applied Catalysis B: Environmental* in press (2017).
- 71 Effects of low temperature annealing on the photo-electrochemical performance of tin-doped hematite photo-anodes.
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- 70 Electronic structure and band alignment at the NiO and SrTiO₃ p-n heterojunctions.
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- 69 Copper(I) Thiocyanate (CuSCN) Hole-Transport Layers Processed from Aqueous Precursor Solutions and Their Application in Thin-Film Transistors and Highly Efficient Organic and Organometal Halide Perovskite Solar Cells.
N. Wijeyasinghe, A. Regoutz, F. Eisner, T. Du, L. Tsetseris, Y.-H. Lin, H. Faber, P. Pattanasattayavong, J. Li, F. Yan, M.A. McLachlan, D.J. Payne, M. Heeney, T.D. Anthopoulos, *Advanced Functional Materials* DOI: 10.1002/adfm.201701818 (2017).
- 68 Quantifying the critical thickness of electron hybridization in spintronics materials.
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- 67 Electron Hopping Across Hemin-Doped Serum Albumin Mats on Centimetre-Length Scales.
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- 66 Reversible Redox Cycling of Well-Defined, Ultrasmall Cu/Cu₂O Nanoparticles.
S.D. Pike, E.R. White, A. Regoutz, N. Sammy, D.J. Payne, C.K. Williams, M.S.P. Shaffer, *ACS Nano* **11**, 2714 (2017).
- 65 Laboratory-based high pressure X-ray photoelectron spectroscopy: a novel & flexible reaction cell approach.
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- 64 Nanostructuring of SnO₂ via solution-based and hard template assisted method.
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- 63 Tunable porous boron nitride: investigating its formation and its application for gas adsorption.
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- 62 Pd₂Ga-Based Colloids as Highly Active Catalysts for the Hydrogenation of CO₂ to Methanol.
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- 61 The impact of post-deposition annealing on the performance of solution-processed single layer In₂O₃ and isotype In₂O₃/ZnO heterojunction transistors.
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- 60 A conducting polymer with enhanced electronic stability applied in cardiac models.
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- 54 A study of the pressure profiles near the first pumping aperture in a high pressure photoelectron spectrometer.
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- 52 Elucidating the deprotonation of polyaniline films by X-ray photoelectron spectroscopy.
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