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## Employment

### Senior Lecturer in Leather Technology

Fashion & Leather Technology  
University of Northampton  
1 Sep 2021 → 31 Dec 2099

### Institute for Creative Leather Technologies

27 Nov 2017 → present

## Research outputs

### Influence of different concentrations of nicotinic acid on the electrochemical fabrication of copper film from an ionic liquid based on the complexation of choline chloride-ethylene glycol

Ballantyne, A., Alesary, H., Ismail, H., Odda, A. H., Watkins, M., Majhool, A. A. & Ryder, K., 1 Sep 2021, In: Journal of Electroanalytical Chemistry.

### Recycling of lead and tin based materials

Ballantyne, A., 6 Feb 2020, Patent No. WO 2020/025970 A1, 2 Aug 2018

### Environmentally Sustainable Solvent-based Process Chemistry for Metals in Printed Circuit Boards

Ryder, K. S., Ballantyne, A., Palin, E. J. R., Smith, E. L. & Abbott, A., 9 Sep 2019, *Electronic Waste Management 2nd edition*. 2 ed. Royal Society of Chemistry, p. 278-312 34 p. (Issues in Environmental Science and Technology; vol. 49).

### Modelling the charge across pH and isoelectricpoint of bovine collagen during leather manufacture

Ballantyne, A. & Davis, S., Jul 2019, p. 1-10. 10 p.

### Sulfide unhairing: Rethinking the received wisdom: Keynote Lecture

Wise, W. R., Ballantyne, A. D. & Covington, A. D., 24 Jun 2019, p. 53-57. 5 p.

### Influence of additives on the electrodeposition of zinc from a deep eutectic solvent

Ballantyne, A., Alesary, H., Cihangir, S., Harris, R., Weston, D. & Abbott, A., 1 May 2019, In: *Electrochimica Acta*. 304, p. 118-130 13 p.

### Electrochemical deposition of silver and copper from a deep eutectic solvent studied using time-resolved neutron reflectivity

Ballantyne, A. D., Barker, R., Dalgliesh, R. M., Ferreira, V. C., Hillman, A. R., Palin, E. J. R., Sapstead, R., Smith, E. L., Steinke, N-J. & Ryder, K. S., 15 Jun 2018, In: *Journal of Electroanalytical Chemistry*. 819, p. 511-523 13 p.

### Lead acid battery recycling for the twenty-first century

Ballantyne, A. D., Hallett, J. P., Riley, D. J., Shah, N. & Payne, D. J., 16 May 2018, (E-pub ahead of print) In: *Royal Society Open Science*. 5, 5, p. 1-12 12 p.

### Real-time in situ dynamic sub-surface imaging of multi-component electrodeposited films using event mode neutron reflectivity

Hillman, A. R., Barker, R., Dalgliesh, R. M., Ferreira, V. C., Palin, E. J. R., Sapstead, R. M., Smith, E. L., Steinke, N-J., Ryder, K. S. & Ballantyne, A. D., 2018, In: *Faraday Discussions*. 210, p. 429-449 21 p.

**Bright Metal Coatings from Sustainable Electrolytes: The Effect of Molecular Additives on Electrodeposition of Nickel from a Deep Eutectic Solvent**

Ballantyne, A., Abbott, A., Harris, R., Juma, J. & Ryder, K. S., 6 Jan 2017, In: Physical Chemistry Chemical Physics. 19, 4, p. 3219-3231 12 p.

**Solder Flux**

Ryder, K. S., Ballantyne, A., Zaleski, C. & Harris, R., 10 Dec 2015, Patent No. WO 2015/185946 A1, 5 Jun 2015, Priority date 6 Jun 2014, Priority No. 1410093.7

**Electrochemistry and speciation of Au(+) in a deep eutectic solvent: growth and morphology of galvanic immersion coatings**

Ballantyne, A., Forrest, G., Frisch, G., Hartley, J. & Ryder, K. S., 27 Oct 2015, (E-pub ahead of print) In: Physical Chemistry Chemical Physics. 17, 45, p. 30540-30550 11 p.

**A Comparative Study of Nickel Electrodeposition Using Deep Eutectic Solvents and Aqueous Solutions**

Ballantyne, A., Abbott, A., Harris, R., Juma, J., Ryder, K. S. & Forrest, G., 18 Jul 2015, (E-pub ahead of print) In: Electrochimica Acta. 176, 10, p. 718-726 9 p.

**Removal of casting defects from CMSX-4® and CMSX-10® alloys by electropolishing in a novel electrolyte: Deep Eutectic Solvent**

Ballantyne, A., Dsouza, N., Appleton, M., Cook, A., Harris, R. & Ryder, K. S., 29 Aug 2014, p. 1-7. 7 p.

**Salt modified starch: Sustainable, recyclable plastics**

Abbott, A. P., Ballantyne, A., Palenzuela, J., Ryder, K. S. & Wise, W., May 2012, In: Green Chemistry. 14, 05, p. 1302-1307 6 p.

**Advanced surface protection for improved reliability PCB systems (ASPIS)**

Ballantyne, A., Forrest, G., Goosey, M., Griguzeviciene, A., Juodkazyte, J., Kellner, R., Kosenko, A., Ramanauskas, R., Ryder, K., Selskis, A., Tarozaitė, R. & Veninga, E., 3 Feb 2012, In: Circuit World. 38, 1

**Do all ionic liquids need organic cations? Characterisation of [AlCl<sub>2</sub>nAmide]<sup>+</sup> AlCl<sub>4</sub><sup>-</sup> and comparison with imidazolium based systems**

Ballantyne, A., Abbott, A., Ryder, K. S. & Abood, H., 8 Feb 2011, In: ChemComm. 47, p. 3523-3525 3 p.

**New polysaccharide-based materials**

Ballantyne, A. & Abbott, A., 29 Jun 2010, Patent No. US 2012/0122997 A1, 29 Jun 2010, Priority date 29 Jun 2009, Priority No. 0911172.5

**Potato packaging**

Abbott, A. & Ballantyne, A., 1 Nov 2009, In: Education in Chemistry.

**Immiscible electrolyte systems based on asymmetric hydrophobic room temperature ionic liquids**

Ballantyne, A. D., Brisdon, A. K. & Dryfe, R. A. W., 10 Sep 2008, In: Chemical Communications. 40

## Press/Media

**US Patent Issued to UNIVERSITY OF LEICESTER on Nov. 17 for "Solder flux" (British Inventors)**

Andrew Ballantyne

18/11/20

1 item of Media coverage

**Australian Patent Office Grants Patent for 'Solder flux'**

Andrew Ballantyne

28/08/20

1 item of Media coverage

**Australia: University of Leicester Receives Patent for 'Solder flux'**

Andrew Ballantyne

3/05/20

1 item of Media coverage

**Unimicron China Subsidiary Fined for Violating Environmental Regulations**

Andrew Ballantyne

7/08/18

1 item of Media coverage

**Institute of Circuit Technology Annual Symposium**

Andrew Ballantyne

13/06/16 → 29/04/17

2 items of Media coverage