

## **Education**

- 1985-89** BSC/ Joint Honours Wood Science/ Chemistry. 2(I)  
**University of Wales, Bangor**
- 1989-94** PhD, Title ' Chemical Modification of Thermal-mechanical Wood Fibre for Medium Density Fibreboard (MDF) Production.  
**University of Wales, Bangor**
- 2011- The BioComposites Centre, Director.** Responsible for the management, Science and strategic direction of the Centre. Overseeing research team of 22 Scientists in the development of bio-based technologies in a range of applications. Managing projects and ensuring that the Centre achieves financial targets. PI on Innovate UK, EPSRC, ERDF and FP7 funded projects. Founder member of the Alliance for Sustainable Building Products.

As director I have implemented and overseen a broad platform of successful projects with a special focus on EU funding. I have structured the management of the Centre and developed clear reporting lines and implemented a programme to improve communications. Achievements have included 3 major EU projects and the development of a new laboratory for super critical CO<sub>2</sub> scale up that was recently spun out to form a new JV company. My management experience includes the chairing and supervision of a number of Innovate UK funded projects working with small SMEs and large multinationals. I am the lead PI for Bangor on the BEACON project, the UK's largest investment in industrial biorefining (£40M). At its midterm review this project has assisted over 70 companies in the convergence region of Wales and has induced over £3.2M of investment into the region. My major interest in the development of bio-derived materials that reduce global warming potential. I have an industrial and academic background in natural fibre production. Expertise includes wood based panel production, biomass extraction/ chemical composition and product development. My current research interests include biorefining, the production of bioplastic products, extraction of value added molecules from plant materials, utilisation of wastes and agricultural co-products for construction applications.

## **Selected References**

- Elias, R M. 2003. Alternative uses for forage crops. Crop Quality: Its role in sustainable livestock production. Aspects of applied Biology. Vol 70. pp 45- 51
- Charlton A; Elias R; Fish S, Fowler, P and Gallagher J. 2009 The biorefining opportunities in Wales: Understanding the scope for building a sustainable, biorenewable economy. Chemical engineering research and design 8 7 pp1147–1161
- Mansour, Loxton , Elias and Ormondroyd. 2014. Assessment of health implications related to processing and use of natural wool insulation products. Pending
- S.F. Curling, N. Laflin , G.M. Davies, G.A. Ormondroyd and R.M. Elias 2017. Feasibility of using straw in a strong, thin, pulp moulded packaging material. Industrial Crops and Products, Volume 97, March 2017, Pages 395–400.