



COST ACTION GREENERING – DATA COLLECTION

First name, Family Name: Suresh C. Pillai

Type (Academic or Industrial): Academic

Country: Ireland

Leadership position in the COST: Member

Working Group in which you are involved: WG1

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Laboratory/Company: Institute of Technology Sligo, Ireland

Laboratory/Company info (limited to 400 characters):

The Nanotechnology and Bioengineering Division composed of scientists and engineers in inter-disciplinary areas of biomedical, nanotechnology, bio-engineering and food technology. The research outputs from the group will also help to achieve the goals of the current IT Sligo research strategy. The PhD researchers and undergraduate project students involved with the proposed group will be trained in strategically important areas of science and engineering and this will enhance their employability in the high-technology sector in Ireland and abroad.

Link to the home page of the Laboratory/Company:

<https://www.itsligo.ie/research/recognised-research-groups/nanotechnology-bioengineering/>

Fields of expertise (limited to 400 characters):

Current research activities included, nanotechnology, materials for sustainable development, polymers, graphene and its composites, food technology, 2 D materials, electrospinning, photocatalysis *etc.*

5 Main publications or patents:

1. Solid electrolytes for high temperature stable batteries and supercapacitors” Vignesh Kumaravel, John Bartlett, and **Suresh C. Pillai*** *Advanced Energy Materials*, **2021**, 11, 2002869. (Impact Factor 25.245).
2. Carbonaceous cathode materials for electro-Fenton technology: Mechanism, Kinetics, Recent Advances, Opportunities and Challenges. Keerthi M. Nair, Vignesh Kumaravel, and **Suresh C. Pillai*** *Chemosphere*, **2021**, 269, 129325.
3. Efficient degradation of diclofenac sodium by periodate activation using Fe/cu bimetallic modified sewage sludge biochar/UV system. Liuyang He, Lixin Lv, **Suresh C. Pillai**, Hailong Wang, Jianming Xue, Yongfei Ma, Yanli Liu et al. " *Science of The Total Environment* (2021): 146974.
4. New insights into the efficient charge transfer of ternary chalcogenides composites of TiO₂. Priyanka Ganguly, Marica Muscetta, Nisha T. Padmanabhan, Laura Clarizia, A. Akande, Steven Hinder, Snehamol Mathew, Honey John, Ailish Breen, and **Suresh C. Pillai.*** " *Applied Catalysis B: Environmental*, **2021**, 282, 119612. (Impact Factor 16.61).



5. A conceptual change in crystallisation mechanisms of oxide materials from solutions in closed systems. Padmanabhan, Siby C., Timothy W. Collins, **Suresh C. Pillai**, Declan E. McCormack, John M. Kelly, Justin D. Holmes, and Michael A. Morris. *Scientific reports* 10, no. 1 (2020): 1-10.

Collaborations:

University of Surrey, UK; University of Cincinnati, USA; VTT Finland;

Facilities: XRD, A range of spectroscopical and microscopical facilities (UV/Vis, FTIR, SEM etc).

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