

## **Developments in Bio-plastics for Packaging and Bio-medical Applications**

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The recent surge of interest in bio-plastics has come from growing concern about the disposal of plastic waste and the need to find alternatives to landfill - for which bio-degradable polymers offer a possible solution. Coupled with this is the requirement to find replacements for fossil fuel feed-stocks, and hence the focus on polymers that are derived from renewable resources, such as plant-based materials.

This talk will discuss the pros and cons of using bio-plastics as packaging films, and how property improvements can be made through polymer blending and nano-filler technology.

In addition, some bio-plastics are bio-compatible and are used for bio-medical applications, such as tissue engineering, wound healing and drug release. Functional films for such applications can be produced by electro-spinning. It will briefly be discussed how processing parameters and formulation can control morphology and physical properties of electro-spun films.