

## Sparxell

**Sparxell** 

# THE NEXT GENERATION OF COLOURS AND EFFECTS

Website

#### **The Challenge**

Glitters can take many sizes and shapes (from the sequins used in fashion to the fine powder used in the paint of 1 in 4 cars sold in Europe or found in cosmetics) yet they all contain problematic microplastics, metals, or mineral oxides. Science warns us that these products accumulate and enter our water supply.

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Europe is banning titania from food due to cancer-causing properties. NGOs shone a crude light on child labour practices enabling mica mining. Not only are these products no longer acceptable for these reasons, but they are also sourced from hard-to-abate sectors that feed climate change.

#### The Solution

Sparxell has created safer and easier-to-source alternative pigments with vibrant colour and benefits that appeal to health and eco-conscious consumers and companies alike. Bio-inspired (think of the profoundly beautiful structural colour of a butterfly), our biodegradable pigments use the self-assembly properties of cellulose



nanocrystals to create helix-like structures that reflect light. As a result, Sparxell's products deliver an intensity of colour and shine more brilliant than most products.

Sparxell's products are made from biodegradable and renewable cellulose, which can even be extracted from agricultural by-products, removing all health, ethical and environmental concerns inherent in other products

#### **Publications and Patents**

Publications:

 Droguet, B.E., Liang, HL., Frka-Petesic, B. *et al.* Large-scale fabrication of structurally coloured cellulose nanocrystal films and effect pigments. *Nat. Mater.* 21, 352–358 (2022)

Patents:

- Patent Pending, Method for preparing structurally coloured films & pigments, WO2023025863A1
- Patent Pending, Ref: GB2302729.5

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