

NATURAL CURIOSITY



01 *Faber Futures*,
Natsai Audrey Chieza

02 *Faber Futures:*
The Fold, Natsai
Audrey Chieza

**Natsai Audrey Chieza is pushing
the possibilities of fabric technology.**

**Jonathan R. Jones delves into the
complexities of her work with
bacterial dyes**

Natsai Audrey Chieza refers to herself as a 'design researcher and maker', but the description struggles to do justice to the scope of her innovative and creative work. A graduate from the experimental Material Futures MA programme at Central Saint Martins, she has recently collaborated with the John Ward Laboratory at University College London. The interdisciplinary programme of research exploits the coloured-dye-producing properties of bacteria, and their implications for textile design. Titled 'Faber Futures', the project takes its name from the Latin *homo faber*, meaning 'man the creator', and articulates the state in which Chieza feels we now find ourselves: 'at the precipice of abundant changes through new emerging biotechnologies'.

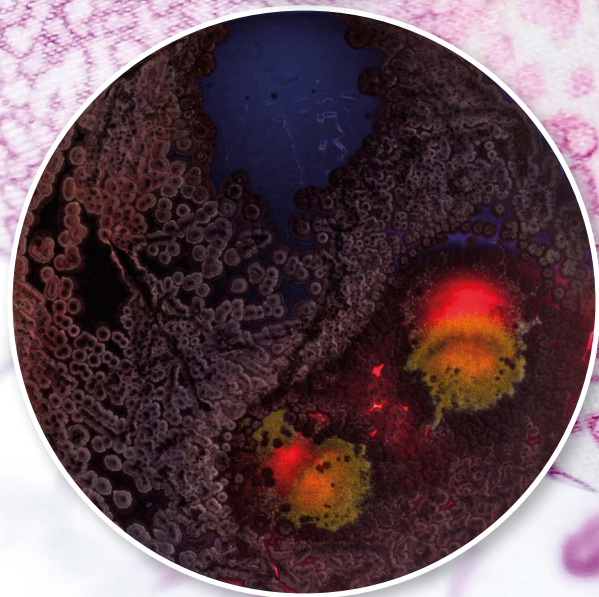
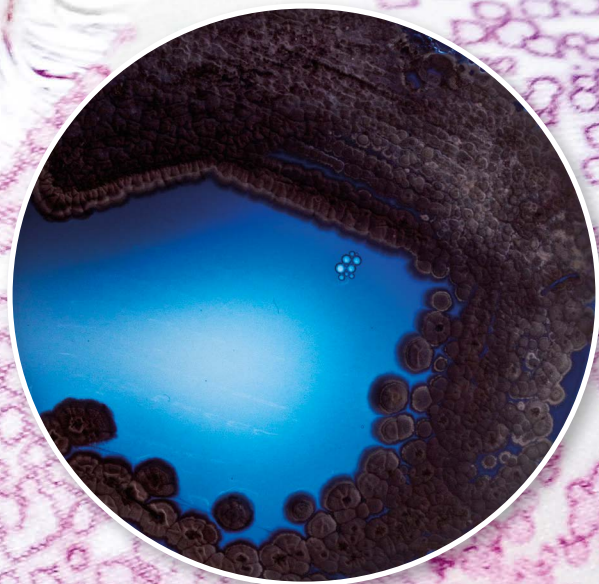
Chieza explains her first steps: 'I remember being completely in awe of a strain of bacteria that produced pigment as a by-product of its metabolic cycle. I knew immediately the impact this could have on the textile industry – the second most polluting industry in the world. Essentially the bacteria were producing a colourfast, mordant-free natural dye with little energy and water.'

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Sustainability is very much central to Chieza's research. The question she now asks of the textile industry is, 'What if bacteria could be harnessed to produce an efficient living factory that offered a much better ecological outcome than current systems of colouring fibres, but also of the cultivation of natural dyes?' Her experiments, which include folded silk scarves impregnated with colonies of dye-producing bacteria, as well as silk-screened fabrics printed with those dyes, are just a starting point for manufacture on a larger scale, according to Chieza.

Her path to becoming a fabric futurologist was an interesting one. She moved to England from Zimbabwe with her family when she was seventeen. Early aspirations to explore an artistic path were tempered by parental expectations, 'I've always been creative and driven by an artistic field of vision,' she says, 'but coming from a highly academic and professional family I understood from an early age that it wouldn't go down well to aspire to be an artist.' So, at eleven, she decided that she would be an architect – a respectable outlet for her creativity, and it was a lucrative career in Zimbabwe before the economic crash.

When her family moved to the UK she continued on that



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path, studying for a degree in Architectural Design at the University of Edinburgh. But during her studies there she was distracted by the call of 'design in broader terms, from fashion to products, systems and speculative futures.' Inspired by her design hero Issey Miyake ('the master of process, material and innovation') she decided that her personal future would be with fabrics.

She describes subsequently joining the Material Futures MA programme at Central Saint Martins as 'a scary prospect'. She explains: 'Effectively you are being trained for roles that don't necessarily exist yet. Its premise is the future of materials and the impact this will yield on humanity.'

Working with bacteria means (safely) embracing chance and accident. Remember Scottish scientist Alexander Fleming's accidental discovery of penicillin in a discarded Petri dish? For a designer, says Chieza, 'Chance and accident are important factors required to innovate – no matter the discipline. Working with bacteria means that chance is a permanent feature: they live and die. That's why each dyed item is unique and not replicable.'

NATURE AS CO-AUTHOR

For a recent exhibition called 'Grow Your Own' at Dublin's Science Gallery, she left a pigment-producing bacteria dyeing fabric in a Petri dish that had been contaminated with a fungus for three weeks. The interaction between fungus and bacteria produced her first golden-yellow pigment. So although she could not have anticipated the appearance of the yellow pigment, that is now part of her palette.

Explaining the relationship between chance, herself as designer and her scientist collaborators, Chieza comments: 'Nature is co-author. The designer, the scientist and the living media collaborate to create something truly unique.'

Craft and handmade processes have seen a resurgence in design lately. I ask Chieza why she feels this to be. 'People are finding more value in cultural provenance and slow design, both driven by the state of the environment and a need for meaningful transactions beyond the passivity of consumerism.'

But beyond the handmade, Chieza believes the potential commercial application of her experiments is significant. She is working on scaling up production. In her own words, her work truly is as an example of how 'design interventions can be applied in the science lab to create beautiful sustainable and compelling ideas of material fabrication and design, now and for the future.'

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