textile futures

fashion, design and technology

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Contents

Hypersurfaces 68
Switchable Surfaces 70
Textural Interfaces 71
Textiles for Virtual Worlds 73
Second Life 75
Feature Interview: Jane Harris 79

4 Vital Signs 85
Antimicrobial Fabrics 86
Biotextiles 91
Diagnostic Textiles 97
Medicating Fabrics 100
Smart Bandages 101
Colour and Well-Being 102
Feature Interview: Ptolemy Mann 104

5 Sustainability 109
Biomimicry 111
Spider Silk 118
Upcycled Chic 120
Weaving Social Links 131
Feature Interview: Carole Collet 140

6 Contemporary Art 145
Textile Installations 147
Second Skins 153
Subversive Stitches 159
Feature Interview: Janet Echelman 166

7 Interior Textiles 171
Soft Walls 172
Fibre Furniture 184
Reactive Surfaces 200
Sensory Membranes 202
Smart Carpets 204
Reactive Rugs 206
Thermosensitive Materials 207
Lighting 209
Fibre Optics 210
Electric Embroidery 211
Feature Interview: Hsiao-Chi Tsai 213
Janet Echelman's sculpture ‘She Changes’ is one of the biggest public sculptures in existence. Measuring forty-six metres in diameter and nearly fourteen storeys high, thousands of kilometres of Tenara fibres were used to create its shape.
‘She Changes’ is designed to interact with the blowing wind and changing light. The sculpture is constantly changing and reforming in response to weather conditions and the movement of the sun across the sky.
As new forms unfold, with them come groundbreaking materials, new functions and new roles for the textile-based practices of the future.

Feature Interview: Janet Echelman

Janet Echelman is an American artist who uses fibres to shape and define architectural space. Through her art, Echelman creates monumental public sculptures made of diaphanous, flexible nets that move and change shape. All of Echelman’s commissions are site specific, and many of her sculptural installations are built outdoors, where they are designed to interact with natural forces such as wind and water. Because the nature of her work requires materials that allow air currents to move through her sculptures—a feature of her work that she describes as ‘wind choreography’—Echelman discovered that strong fibres and lightweight fabrics are ideal materials for her art. Light also plays an important role in her work; rays of sunlight cast light and shadows over her sculptures by day, and by night, floodlights transform her work into glowing, luminous shapes. Echelman also considers how her sculptures project shadows onto adjoining surfaces, adding additional layers of movement and depth.

Janet Echelman’s sculpture ‘She Changes’ is suspended from a massive ring of hollow steel hung between three steel poles of varying heights. It was crafted from Tenara, chosen for its resistance to strong winds and ability to retain its red pigment despite constant exposure to UV rays.
'She Changes' is a public artwork commissioned by the city of Porto in Portugal and situated near the port. The artist, Janet Echelman, designed its net-like structure to reference the region's seafaring and fishing history.
Janet Echelman uses fibres to shape and define architectural space. This public commission for the Richmond Olympic Oval in Richmond, British Columbia is crafted from industrial-strength Tenara.

Echelman designed and constructed one of the world's most extraordinary textile artworks in 2005. Titled 'She Changes', the sculpture was built on the waterfront in Porto, Portugal. Measuring forty-six metres in diameter and fourteen stories high, 'She Changes' is one of the biggest public sculptures in existence. The sculpture was created in collaboration with a textile manufacturer, an architect and a software developer. 'The artwork is actually a complex, multi-layered form created by twisting, braiding and knotting nearly one ton of Tenara fibres,' Echelman explains. 'I got help from Phillip Speranza, a New York-based architect, to translate my drawings into 3-D computer models, then asked Peter Heppel, a sail software specialist based in Paris, to develop a software programme for the piece. The software showed me how the sculpture would move in the wind and revealed what engineering considerations there would be.' The textile structure was fabricated in Washington State by hand and by machine, then shipped to Portugal in pieces. Cranes were brought to the site to hang it, where it was suspended from a massive ring of hollow steel hung between three steel poles of varying heights. 'The sculpture is similar to a net', Echelman explains. 'It was created using a fibre that could withstand a windy environment with long periods of UV exposure. Tenara is light enough to respond to the wind and durable enough to retain its red pigment despite long periods of UV exposure. I had looked at plant fibres, silk and nylon, but none of them have the durability of Tenara.'
Echelman used high tenacity multifilament polypropylene to create an indoor sculpture for a multistorey car park in Tampa, Florida. 'There's little natural light, so I included 36-degree ellipsoidal spotlights and dichroic glass filters in the work,' Echelman explains. 'There are two parts. The first part is a three-dimensional line drawing suspended from the ceiling. The second part has no physical presence at all, and is merely a projection of the other, creating a 400-foot-long shadow drawing. I began to see this as a contemporary interpretation of Plato's Allegory of the Cave, using urban infrastructure as a modern-day cave wall.'

Echelman uses fibres to relate the story of the tension between movement and stillness, between the tangible and the ephemeral. With fibres as her medium, Echelman's works show the extent to which textiles can be sculptural, tactile and architectural expressions. The scale of her work reveals that textiles have the potential to create large-scale installations, taking contemporary art to completely new heights.