



POL OXYGEN

# DESIGN

an international circus  
of art design & architecture

**OKI SATO  
ENRICHES HIS  
DESIGN AND HIS DAYS  
WITH '!' MOMENTS:  
SMALL, RICH, EXCITING  
TIMES. HIS ORIGINALITY  
AND HIS '!' MOMENTS  
SHINE THROUGH HIS  
CHAIRS, FOR EXAMPLE,  
WHICH RANGE FROM  
EXQUISITE LACEWORK  
PRODUCED BY  
HIGH-TECH RAPID  
PROTOTYPING TO  
CHAIRS HANDCUT  
FROM ROLLS OF  
PAPER.**

**MOMENTS**







## OKI SATO IS SITTING IN HIS OFFICE IN TOKYO EXPLAINING SELECTIVE LASER SINTERING (SLS) TECHNOLOGY TO ME.

"It's something like a box filled with nylon powder," he says, "and when you put the 3D data into the box, two lasers come down and melt the nylon powder. And it creates the chair. Since we could not make it by hand, or use moulds, that was the technology we needed."

Sato is talking about the Diamond chair he designed for Lexus, Toyota's high-end automotive vehicle division, at Milan Salon Internazionale del Mobile this year. Visitors to the Museo della Permanente saw the chair slowly emerging before their eyes from an Eltro Optical System (EOS) Rapid Prototyping machine.

Rapid prototyping technology is actually quite old, dating back to the late 1980s, yet the notion of a machine transforming ideas into objects without ever being touched by hand still appeals to our fanciful side as a metaphor for the generative power of the imagination – the word made flesh.

Laser sintering divides CAD data into manageable layers – just as a laser paper printer tackles one line of data at a time – and the powder

is sintered (melted) into shape one layer at a time until the complete object materialises. A high level of complexity can be achieved this way. Due to the size of the machine, the chair had to be sintered in two pieces, one inside the other. Once hardened and with the excess powder cleared away, the two halves snapped together.

"It's an expensive technology used in the car industry," says Sato. Although there are no plans to mass produce the Diamond chair, it was put forward in Milan as a product that could eliminate furniture transportation costs – orders could be filled by sending the data to a machine in the purchaser's home country. It's also thought that 3D 'printing' might be how people will obtain products in the future – downloading patterns from the internet and printing them in their own home RP machines.

The chair itself is a thing of elemental beauty. Sato's brief was to promote 'L-Finesse', the Lexus design philosophy that can be roughly described as "a combination of the leading edge and the understated and human." "The basic concept of the Lexus brand is to mix two contrary elements," says Sato. "Something that is solid and strong, and the contrary – something that is very flexible and very fragile. What I thought was to mix these two together to create something that is flexible, yet strong. When I thought of something solid and beautiful, I thought, 'diamonds'."

The atomic structure of diamond influenced the chair's polymer matrix, which is tough yet supple enough to bend to the human weight. It has a ghostly but tangible presence not unlike a cut diamond, being both complex and simple.

Handpicked by Lexus for the exhibition, Sato says he has no plans at present to invent any new designs using SLS technology. "Usually I don't start from technology or materials," he says. "I start from concepts."

The idea of base materials having life breathed into them is mirrored in the playful name of Sato's design firm. "Nendo means free-form clay," he says. "Play-doh. Something that kids play with. A flexible thing."

He was born in Canada in 1977 and spent his first decade in Toronto, after which his family returned to Japan. He launched Nendo in 2002 on graduating from Waseda University with an MA in architecture and quickly threw himself into all aspects of design. The company does products, buildings, interiors, events, packaging and graphics. Sato commands a staff of seven: two designers, one architect and four administrators.

### the '!' moment

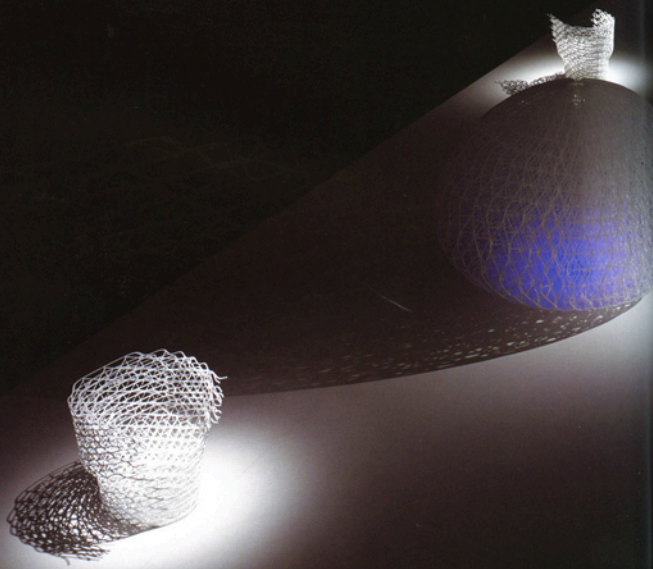
His design philosophy is simple. "I try not to design something too new or too different. It's about finding small moments of happiness or excitement within everyday life." The Nendo website defines these as "'!' moments": "We believe these small '!' moments are what make our days so interesting, so rich."

A formative event for Sato was attending his first Milan Salone Internazionale del Mobile in 2002. "It was like a graduation trip to see the furniture fair. And when I went there I saw all these designs that were done so freely and I thought, I would like to exhibit here. And that was the way Nendo started. It was a turning point."

Nendo's Cabbage Chair, designed for Issey Miyake, commemorates the first anniversary of the 21\_21 Design Site, a contemporary art exhibition space in Roppongi, Tokyo. The chair is shipped as one compact paper roll, has no internal structure and is assembled without nails or screws by cutting the paper vertically and stripping it back, layer by layer.









The three elements of the Lexus 'L-finesse' concept are: Seamless Anticipation; Incisive Simplicity; and Intriguing Elegance. They are given form here in Nendo's Elastic Diamond installation for Lexus at Milan 2008, which explores the flexibility and strength of a diamond's composition.





### going Dutch

Ironie Netherlandish design, as practised by the likes of Droog and Moooi, entered his bloodstream. There is no shortage of Nendo designs that are simulacra: a bathmat that looks like a manhole cover; a chair that resembles a piece of clothing billowing in the breeze; a light switch shaped like a light bulb; and a karaoke room that mimics a bathroom.

For a recent museum installation in Tokyo, Sato designed an elegant two-metre tall clock with hands like the blades of a windmill (Kazadokei, 2008). With the fast-rotating seconds hand extending 1.5m, you wouldn't want to stand too close to it. A 2007 project with Japanese patissier Tsujiguchi Hironobu yielded a set of chocolate pencils in varying cocoa blends with an accompanying 'sharpener' for grating chocolate shavings onto desserts.

Nendo's most widely available product is the steel Ribbon stool for Cappellini (2007), inspired by the ribbons that tie up a ballet shoe. "I thought, why not make the stool with three loops, instead of three legs?" Sato says. Cappellini also makes Nendo's Yuki screen (2006), composed of interlocking white 'snowflakes', and the Island table (2007), which looks like two randomly placed tables but is actually one piece. Sato got the idea from islands that, at low tide, reveal themselves to be joined.

### sticking to tradition

I wondered if there was something slightly subversive about these playful, 'disguised' works.

Is his practice somehow a reaction to the strictures of Japanese society? "I don't really feel I'm a rebel," he says. "I think that it is something that the Japanese people have been doing for a long time. It's within the Japanese tradition of seeing the same thing in a different way."

The '!' moment isn't always just a visual joke; it can be about emotion too. Sato's Crack vase (2003/2004) is designed to hold a single flower that looks like it has sprouted up through a crack in the pavement. The image has a lot of resonance for the Japanese – the lonely soul in the city, the poignant contrast of the perennial with the transitory.

Tactility also comes into play. For the interior of a house on the Shibuya River in Tokyo's Ebisu neighbourhood, Sato took inspiration from the strands of moss on the riverbank and applied actual dried moss to the interior in vine patterns – like wallpaper that has sprung eerily to life.

### over the limit

Nendo designed the interior of Topsy's, a Tokyo restaurant, with wooden floorboards over Styrofoam, causing the floor to sink slightly under the weight of footsteps so as to mimic the sensation of drunkenness. "It was too soft at the beginning," Sato admits with a laugh. "People were getting really dizzy, so two or three years ago we changed the material underneath the floorboards. It's a little stiffer than it was at the opening."

The design that Sato is currently most excited about is a collaboration with Issey Miyake for the fashion designer's XXIst Century Man exhibition in Tokyo earlier this year. Miyake curated the

show to include Japanese and international creators who "address today's many doubts and insecurities through their individual forms of creative expression".

### do-it-yourself with a difference

Recalling Droog Design's interactive Do Hit range (2000), and reminiscent of origami, Nendo's Cabbage chair (2008) is a tight cylinder of waste paper from the fashion industry. Once you get it home you cut the rolls of paper vertically down half their length and fold them back one layer at a time until you have a comfortable, cabbage-like form to sit in.

"The chair has no internal structure," the designer notes on his website. "It is not finished and it is assembled without nails or screws. The primitive design responds gently to fabrication and distribution costs and environmental concerns, the kind of issues that face our 21st century selves."

The design resembles not so much a vegetable as a squat human form in various stages of dress and undress. Half-peeled, it's like a ballet dancer in a tutu; finished, it looks like a hooded monk. Sato was inspired by a comment that Miyake made in one of their meetings: that optimistic 21st century people "don't just wear clothes, but shed their skin".

"That was the first time I really collaborated with a different designer," Sato says. "It's my favourite design, definitely."

Reconstituting, reshaping and reincarnating – Nendo's visionary work is transformative stuff.