

Vinyl records are coming back, that's a fact! For a medium that everyone thought was dead, it's return and upward sales figures are impressive. But what do you do with the millions of copies of vinyl records that people no longer use for one reason or another? Think recycling: Vinyl is an eminently recyclable material.

Imagine if you were able to recycle old and new vinyl record pressings into desirable luxury products. Raw material sources focussing on vinyl destined for disposal. This includes library collections, new unsold records from distributors, misprinted records from manufacturing plants, as well as private collections. and have discovered a method to fuse a plastic made from dead plankton (crude oil) to a plastic made from wood (cellulose acetate). They have convinced the world that it is cool to wear vinyl on your face.

The road wasn't easy: they had to first overcome two obstacles: manufacturing and marketing. Over the years they developed manufacturing processes to laminate, mill, protect, thermoform, deep draw and sew both the 7" single and 12" albums. As their manufacturing methods evolved, their capacity also grew.



Now imagine recycling these vinyl records into eyewear and accessories - including eyeglasses, eyeglass cases, display stands, mirrors and business cards!

Vinylize, a Hungarian brand, have developed special processes to recycle vinyl records. This includes laminating the vinyl onto cellulose acetate, sewing zippers directly to the vinyl, thermoforming, deep drawing and milling. Their project shows that one of the most commonplace vinyl products can be recycled. They also show that it is a multifaceted product with many uses.

Before Vinylize, vinyl records were used

solely for the purpose of music reproduction. Vinylize showed that this abundant material could be profitably recycled into other objects as well.

Vinylize has recycled tonnes of vinyl records since its inception. They have developed novel ways to process the material while preserving its properties to still make it recognisable in its new form. They have introduced the world of fashion to ridged PVC And as their production capacity grew, they simultaneously developed markets. By having their products accepted by celebrities like Elton John, Sir Richard Branson and Robbie Williams, to name a few, they were able to convince potential customers that vinyl was durable, fashionable and sustainable.

The product has been launched globally and is available at over 300 eyewear stores.

SUSTAINABILITY Vinylize

Vinylize those records!







Bao Bao



ART & DESIGN







The articulated Bao Bao bag, a masterpiece for architects and designers, has been recently redesigned with an assortment of new colours and shapes, including arrows, circles and lighting bolts. The Chord Collection, by the Japanese fashion designer Issey Miyake's Bao Bao brand, is the first to depart from the classic tessellating triangular structure used since the design debuted in 2000.

As well as the original triangles, the bags feature various interlocking geometric shapes, including the lightning bolts and arrows. But circles sit inside an otherwise empty square within the pattern. The PVC panels mounted onto the fabric mesh underlayer of the bag cause it to take on different shapes as it is used.

Sharp outlines are crafted from fine materials and accented with standout pattern detailing. The design of the Bao Bao Issey Miyake collection builds on the concept of 'accidental' shape, from where handbags come to life boasting a functional flexibility. The series features not only brand's iconic triangular pieces, but also round, square, arrows and lightning bolt details, which have never before been used in the brand's collections.

The design is a continuation of Miyake's experiments with fabric, vinyl and construction, with the idea that the more rigid triangles would create "shapes made by chance" when the bags are moved or placed on surfaces. It features a flexible functionality, perfect for busy modern lifestyles. Designer | <u>Issey Miyake</u>, Tokyo, Japan Producer | <u>Bao Bao</u> Issey Miyake, Tokyo, Japan Technical info | PVC panel Picture credits | <u>Bao Bao</u> Issey Miyake



iGuzzini Headquarters

The iGuzzini Iberian headquarters in Barcelona, designed by local Mias Arquitectes, is characterised by a geodesic ellipsoid suspended above an open landscape.

Placed adjacent to a roadway hub, the spherical shape is subtly deformed on the south side to destabilise the otherwise perfect geometry. A PVC fabric membrane is wrapped around the triangulated frame to provide shade, which is composed in response to solar orientation, improving the comfort, and protection, of its interior spaces.

The building does not seek to boast of explicit technological innovation, but it does seek to be an example of current development towards wellunderstood sustainability in both technological and energy terms. The project seeks to exemplify, in architecture, the conditions closest to humankind including: collectivity, ambition, and excellence.

The appearance of the Spanish iGuzzini Headquarters is intended to look like a large lamp, a reference to the mission of iGuzzini, which is an international brand for indoor and outdoor lighting.

A large central void, occupied by the single column from which the entire building is suspended, permits greater light and energy control inside. The space within the sphere is used for offices and research facilities.

Through the design of the headquarters, Mias Arquitectes sought to create light architecture that keeps its relevance over time with regards to its structural expression, connection to the site, and passive environmental systems.



ARCHITECTURE

Architects | <u>Mias Arquitecte</u>s, Barcelona, Spain Location | Barcelona, Spain Technical info | PVC membrane Ferrari Stamisol Picture credits | <u>IASO, Adrià Goula</u> 1.65



Fan Lamp

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Italamp, one of the leading companies in the lighting sector, have been working for 40 years in the indoor lighting decoration field, as a fresh and lively company able to combine a modern industrial philosophy with the distinctive attitude of Italian handmade.

This approach does not only rely on the stylish and sophisticated design of the products, but also on the endless capacity to reinvent the meaning of light objects.

Fan Lamp, designed by Italian designers Stefano Traverso and Roberta Vittadello, is an example of this method, using a strip of mass-coloured PVC to create a playful and dramatic diffuser. The main idea is to create accessible design, and therefore a lamp that is elegant and original but not over-thetop, for those seeking a product that is both classic and in step with the times.

Fan Lamp, which is developed as a table and hanging lamp, looks like an interpretation of the thousand-year-old history of glass, introducing a more contemporary and unusual material like PVC combined with small crystals. Fan Lamp unites functionality and aesthetics in a light object that is capable of exploring the indoor as well as the outdoor, synthesising the ancient arts of crystal cutting and pottery making.

Designer | **Stefano Traverso, Genova, Italy + Roberta Vittadello, Cadoneghe, Italy** Producer | <u>Italamp</u>, Cadoneghe, Italy Technical info | Flexible PVC strip Picture credits | <u>Italamp</u>





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Architects | <u>Casper Mueller Kneer Architects</u>, London, UK Location | <u>London, UK</u> Technical info | Barrisol PVC Ceiling Picture credits | Paul Riddle London-based Casper Mueller Kneer Architects recently re-designed the White Cube Bermondsey, the gallery's third and largest venue in London. More than 5440 m2 of existing 1970s' warehouse space was transformed to provide exhibition spaces, warehousing, private viewing rooms, an auditorium and a bookshop.

Materially, the industrial character of the building was maintained and enhanced by new additions and modifications. The structure was generally retained, but opened up and substantially modified. A new entrance yard, brought a previously closed off space into the public realm and draws new audiences to the area. Internally the public spaces are arranged along a 60m long street-like long corridor.

There are three principal exhibition areas which differ in dimensions, proportions and lighting conditions: The 'South Galleries' provide 780m2 of column free space and act as the main display area. The 'North Galleries' are smaller, more experimental in character. '9x9x9' is a centrally located cubic space: the only space penetrating the existing building envelope and flooded with natural light. An auditorium allows the presentation of films and lectures.

The new gallery spaces were inserted as free standing volumes at the heart of the building – shells within a shell. And surrounded by ancillary spaces and service voids. This allows the galleries to be serviced from all sides and be structurally and environmentally self-contained, independent from the existing building.

The lighting design provides a completely even light. Some galleries combine natural and artificial light developed through a white membrane of PVC which gives them a homogenous illumination. All viewing rooms and gallery ceilings allow for varying sub-divisions by temporary walls.

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Tulip Fan Fan 2

STRUTTE

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Common encoderation





Tallin-based design studio Keha3 recently designed their new version of the Tulip Fan Fan 2 bike rack.

Tulip Fan Fan 2 is an elastic and safe rack resembling a meadow. It provides freedom to choose the way and direction of placing the bike. The fixing place of the bike is not uniquely determined hence it is suitable for fixing bikes with different heights and different types of frames.

When placing the Tulip Fan Fan bike racks side by side, it is possible to create partitions, artificial barriers to the city environment. There are two ways for fixing the rack – either with bolted connections/wedge anchors into the ground or cast into concrete.

The new improved Tulip Fan Fan-2 has a more stable and stiff form and a frolicsome shape. The upper third of the bike rack is flexible, so it can even hold bikes with bigger than average wheels. Thanks to a spatial and constructive solution, it achieves better stability while placing the bike sideways or with the front wheel in the rack. It is also now possible to change the PVC cover protecting the metal rope or the bike frame for the purpose of changing colours or giving it a fresher look.

First version of Tulip Fan Fan came out in 2011 and it was an elastic and safe rack resembling a meadow.

> Designer and producer: <u>Keha3</u>, Tallinn, Estonia Technical info | PVC piping with steel or concrete structure Picture credits | <u>Keha3</u>

Heydar Aliyev Centre



ARCHITECTURE



Architect | Zaha Hadid Architects, London, UK Location | Baku, Azerbaijan Technical info | Barrisol PVC membrane Picture credits | Iwan Baan As part of the former Soviet Union, the urbanism and architecture of Baku, the capital of Azerbaijan on the Western coast of the Caspian Sea, was heavily influenced by the planning of that era. Since its independence in 1991, Azerbaijan has invested heavily in modernising and developing Baku's infrastructure and architecture, departing from its legacy of normative Soviet Modernism.

Zaha Hadid Architects were appointed as design architects of the Heydar Aliyev Centre, following a competition in 2007. The Centre, designed to become the primary building for the nation's cultural programs, breaks from the rigid and often monumental Soviet architecture that is so prevalent in Baku, aspiring instead to express the sensibilities of Azeri culture and the optimism of a nation that looks to the future.

The design of the Heydar Aliyev Centre establishes a continuous, fluid relationship between its surrounding plaza and the building's interior. The plaza, as the ground surface; accessible to all as part of Baku's urban fabric, rises to envelop an equally public interior space and defines a sequence of event spaces dedicated to the collective celebration of contemporary and traditional Azeri culture.

Elaborate formations such as undulations, bifurcations, folds, and inflections modify this plaza surface into an architectural landscape that performs a multitude of functions: welcoming, embracing, and directing visitors through different levels of the interior. With this gesture, the building blurs the conventional differentiation between architectural object and urban landscape, building envelope and urban plaza, figure and ground, interior and exterior.

One of the most critical yet challenging elements of the project was the architectural development of the building's skin. The ambition to achieve a surface so continuous that it appears homogenous, required a broad range of different functions, construction logic and technical systems had to be brought together and integrated into the building's envelope. Advanced computing allowed for the continuous control and communication of these complexities among the numerous project participants.

The space frame system enabled the construction of a free-form structure and saved significant time throughout the construction process, while the substructure was developed to incorporate a flexible relationship between the rigid grid of the space frame and the free-formed exterior cladding seams. These seams were derived from a process of rationalising the complex geometry, usage, and aesthetics of the project.

Glass Fibre Reinforced Concrete (GFRC) and Glass Fibre Reinforced Polyester (GFRP) were chosen as ideal cladding materials, as they allow for the powerful plasticity of the building's design while responding to very different functional demands related to a variety of situations: plaza, transitional zones and envelope. Ceilings are finished using flexible PVC membranes to achieve a continuous and homogenous surface.





Tubes Lamp



ART & DESIGN



Dix heures dix is a French lighting manufacturer who has spent the past 20 years crafting lighting collections whose main purpose is to diffuse "beautiful light".

Striking a balance between the rigorous approach of industrial design and the richness of artisanal expertise enables dix heure dix to offer innovative, upscale lighting solutions.

Blending inspiration drawn from architecture, art, plant-life and the world of fashion, the three designers (Catherine Grandidier, Fabrice Berrux and Ludovic Roth) strive to invent narrative lighting where each product tells its own story.

Supporting the work of the designers, the technical team at Dix Heures Dix incorporates the latest advances in lighting to ensure that each product offers "efficient light".

Tubes Lamp is a floor and hanging lamp with a diffuser made of 18 translucent PVC-filmed cylinders, which give a warm light effect. All tubes are available in two different finishes: gold and aluminium, while the structure is metal-painted.



Designer | <u>Fabrice Berrux</u>, Paris, France Producer | <u>Dix Heures Dix</u>, Paris, France Technical info | PVC tubes Picture credits | <u>Dix Heures Dix</u>

Velodrome du Centre Mondial du Cyclisme



ARCHITECTURE

For 50 years Buckminster Fuller's ideas about lightweight structures have been fascinating people, and not just structural engineers and architects. He showed how to create a stable geodesic structure in which non-contiguous elements subject to pressure are combined with contiguous tensioned elements.

In keeping with this principle of "tensegrity", the office of Grand Architects spanned the elliptical floor space of the velodrome in Aigle with a support-free double layer pneumatic membrane structure. With a diameter of 70m x 90m and a PVC-PES membrane area of almost 5,000sqm, the membrane cushion is among the largest of its type in the world-

On the ground, the steel structure consists of three adjacent compressed rings, which are connected by spokes made of round tube profiles. The outer ring is in the form of a three-dimensional structure. Suspended in between are vertical "air supports", which run up and down in the shape of a pyramid, attached by four tension rods each. In addition, the entire steel structure is undergirded by tie rods which run from the edge beams across the air supports to the inner tension ring.

The pneumatic cushion is composed of two layers of membrane, manufactured from PVC-coated polyester material, which is assembled and mounted in a single unit. The lower membrane is supported at the edge by 56 air supports and a cable grid, while the central area with a diameter of 40m is an unsupported span.

The upper membrane stretches across the entire ellipse. It is held in place by 28 radial cables that rest on the outer membranes. These cables are protected from the weather by sleeves. Two blower stations keep the air pressure at 379Pa. Sensors mounted inside the membranes respond to weather conditions and control the pressure in the membrane up to a maximum of 1,000Pa. The attic's circumferential aluminium cladding forms the outer end of the roof.

The displacements are controlled by an automatic system to adjust the internal pressure.



Architects | <u>Grand Architect</u>s, Lausanne, Switzerland Location | <u>Aigle</u>, Switzerland Technical info | PVC-PES membrane roof; PVC-coated polyester fabric Picture credits | <u>Seele</u>, <u>Grand Architects</u>



Editor: <u>Madhu Kopparam</u>

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