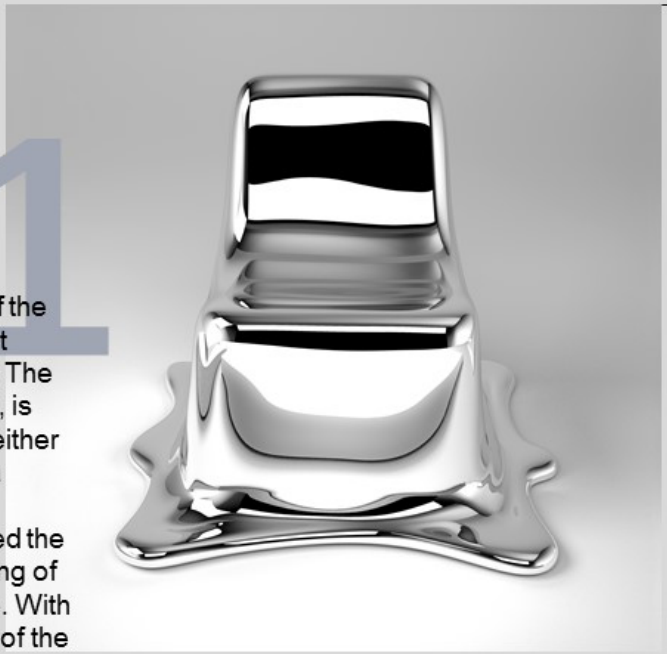
CREATIVE DESIGN

by Philipp Aduatz

Designer Philipp Aduatz creates limited edition functional objects that are highly sculptural in nature. Working with innovative materials and fabrication technologies, Aduatz is very much influenced by scientific matters such as chemistry, physics and material technologies. His process combines traditional craft concepts and techniques with cutting edge implements.

1



Philipp Aduatz´ intention in the design of the *Melting Chair* is to capture a transient transformation within a sculptural object. The Melting Chair, which is suitable for use, is carefully crafted to appear to the viewer either as a solid chair melting away or as a solidification of a liquid melt.
To create a realistic illusion, Aduatz studied the solidification of fluids as well as the melting of solids with modern 3D animation software. With this background, he designed the surface of the object down to the smallest detail - like an architect plans a huge skyscraper. Through form studies with CNC milled polystyrene models and rapid prototyping he ensured a perfect geometry. The final object is made out of a fiberglass reinforced polymer, a light and strong composite material that is very durable. The surface is coated with a special mirror coating for a metallic appearance. A special clear lacquer is used to protect the mirror coating from aging and makes the surface of the Melting Chair scratch resistant.

2

The design of the *Villarceau Table* is based on a geometric characteristic discovered by the French astronomer Yvon Villarceau. Main concept is to design a shape by using a mathematical achievement in order to explore a design concept based on the aesthetic dimensions of scientific knowledge.
The Villarceau circles are a family of circles constructed by slicing a torus with bitangent planes at a specific angle (Théorème Villarceau, 1838). Every point on a torus can have four circles drawn through it; two of them are the Villarceau circles. They are named after the French mathematician who discovered them, Yvon Villarceau. The slicing plane passes through the torus' center. Hence the slicing angle depends on the dimensions of the torus itself

3

The idea of the *Polymorph Chair* is to unify contrary design concepts in a single shape.
In the ancient greek language "poly" means "many" and "morphé" stands for "shape". The term "Polymorph" in this context refers to a design that is composed out of multiple concepts differing in their design vocabulary but yet fusing together into a unified single shape of a chair.

The concept for the design is based on research in design history, when reviewing the different languages of form over time, there are two basic ideas recognizable: Minimalist, linear and functional shapes on one hand, and organic and spherical forms inspired by nature on the other hand. These concepts seem to be competing with and alternating to each other.