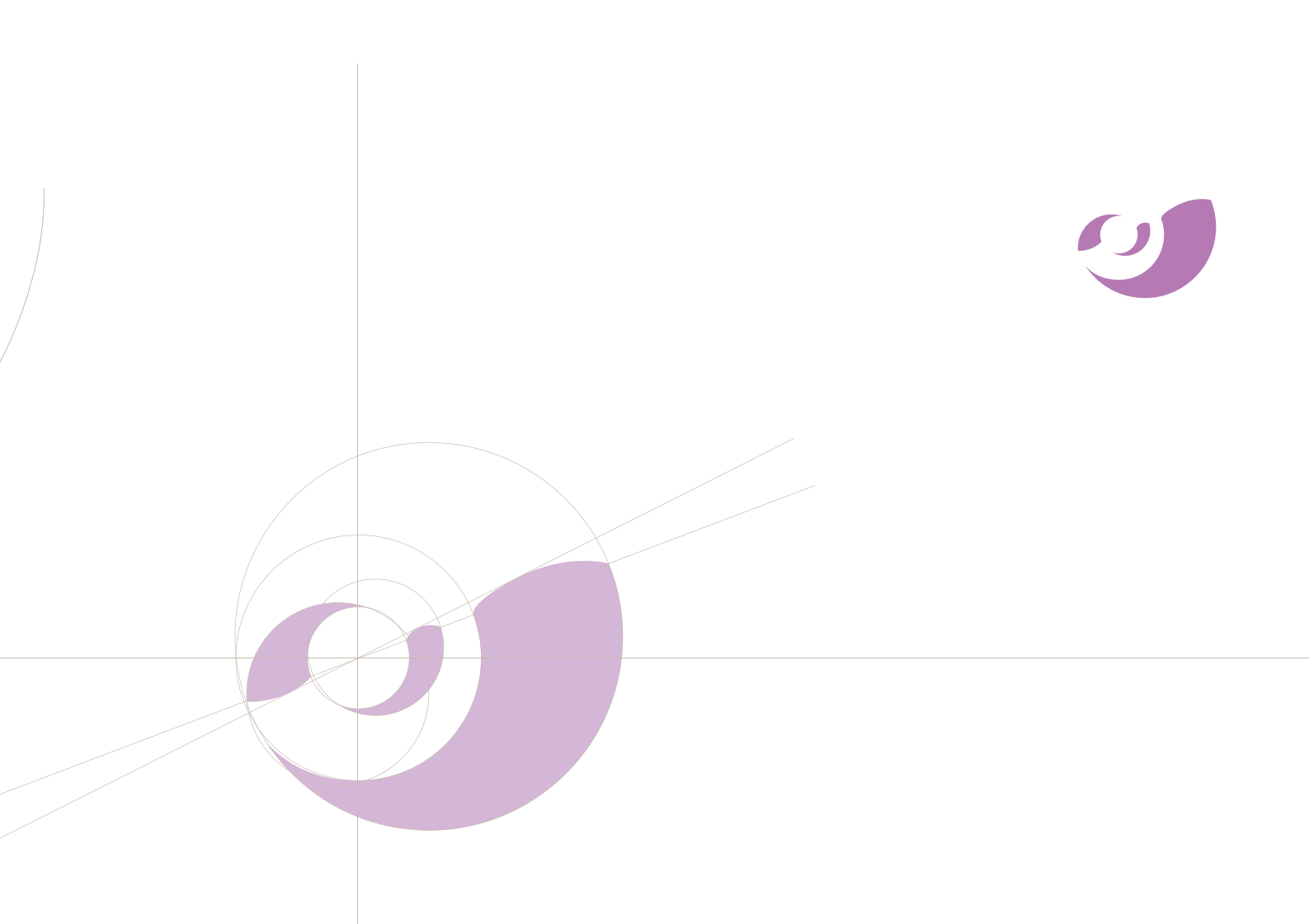




the inspiring book
of PLEXIGLAS®

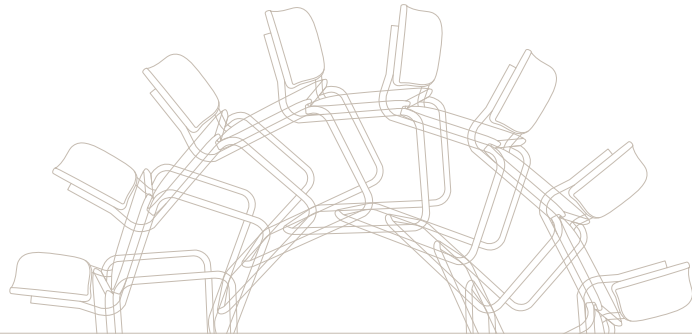
**“Inspiration exists,
but it has to find you
working.”**

Pablo Picasso



Trademarks are everywhere. They accompany us throughout the day, give us a feeling of security and create trust. With a well-known brand, you can relax and feel everything is taken care of. No room for doubt or questions. The brand is there in your mind, and its name creates an instant buzz. It revives memories, gives shape to plans for the future and brings a smile to people's lips. People are proud to be seen with this brand, show that they use it and take advantage of its familiarity. The brand has become an essential part of personal life. It stands for constancy yet moves with the times. It is reliable yet always good for a surprise. Its very name represents a cluster of positive attributes on which we can rely. In this way, a brand is also a promise.

Inspiration is the most important promise that PLEXIGLAS® makes, and constitutes its very essence. With its unique properties, it provides impetus for ideas and creativity. PLEXIGLAS® is creative, refreshing, passionate and exciting. On the following pages, inspired people tell us what these terms mean in their world – for the present, and for an imaginative and creative future.



INSPIRATION

Fantasy, originality, power of imagination, wealth of ideas, power of conception, ingenuity, creativity, mental acuity, quick thinking, understanding, inventiveness, insight, brainwave, abstraction, impulse, flash of inspiration, spark.



“Inspiration is a question of attitude”

People looking for inspiration need to clear their minds and be open for all that is new. “In the final analysis, inspiration is a question of attitude,” says Michael Träxler, and looks at a line of chairs hanging on a wall in Berlin’s Bauhaus-Archiv. These are designs by Bauhaus artist Marcel Breuer. “These items of furniture are simple and functional, but at the same time extremely innovative and pathbreaking, both in terms of their design and the materials the artist combines.” A case of inspiration? “Exactly.”

What is inspiration? That lies in the eye of the beholder. Some look at the sea and let their thoughts drift. Others look at the people around them and observe their behavior, facial expressions and gestures. “Whatever the source, it always takes an external influence to get ideas flowing,” says Träxler. “But they can be sparked by something quite simple. It doesn’t always have to be something monumental.”

Quite the contrary, often we are inspired by trivial everyday items. Art frequently arises from mundane observations. “We usually develop new products based on a specific need that we see among our cus-



Michael Träxler is Senior Vice President Acrylic Polymers at Evonik.

“Creative minds must be allowed some leeway.”

tomers.” All the same: “I have to admit that chance often plays a role when it comes to developing great ideas.” PLEXIGLAS®, for instance, was not invented according to plan. It was developed by chance in the early 1930s – “precisely what we don’t want to happen today,” says Träxler with a grin. “Today, the aim is to consider quite specifically where and how the material can be used in 10 years from now.”

It also works the other way round. The material itself can provide inspiration:

materials were a major source of ideas for artists of the Bauhaus school. They experimented with construction materials and combined them in new contexts. Walter Gropius, for instance, designed Bauhaus Dessau in the 1920s with a three-story glass façade, which was completely new at the time. Many Bauhaus artists held the principle that “form follows function.” “I believe the combination of functionality and design still inspires many creative people today,” says Träxler. “Take architects, for example. They see

the possibilities offered by PLEXIGLAS® – and that gets them thinking.”

For inspiration to take a hold, it takes more than being open to outside influences. The environment also has to be right, Träxler thinks. First of all, a culture has to be created in which creativity can run unchecked – whether in a studio, a design workshop or a company. “There has to be a certain level of tolerance towards mistakes. Creative minds must be allowed some leeway. And if they are wrong once

Bauhaus-Archiv Berlin/Purchased with the support of the Ernst von Siemens Kunststiftung
Copyright: VG Bild-Kunst, Bonn 2011





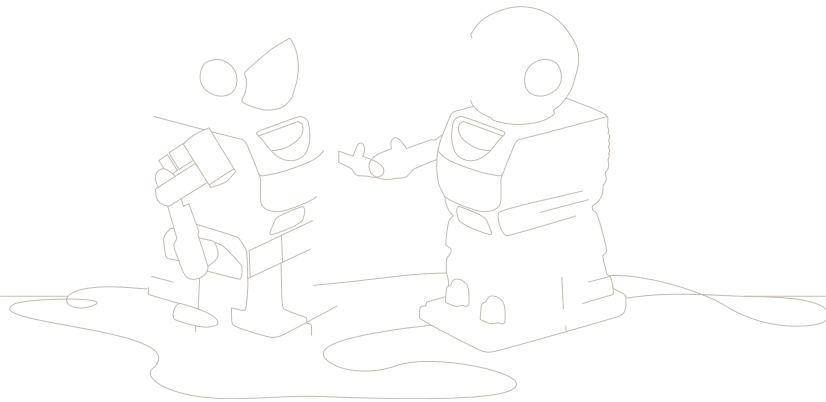
in a while – so what? Inspiration cannot thrive if such people fear all their mistakes will have consequences,” Träxler states, and adds that: “Anyone who is inspired should be able to contribute their ideas, wherever they work. Anything else would be a dreadful waste.”

Inspiration alone is not enough to make a sculpture or develop a new product: “Inspiration needs to be paired with sound technical and material know-how,” Träxler explains as he strolls past some Bauhaus

ceramics. “When you look at these ceramics, you realize that to shape an object, you have to know how to operate a potter’s wheel. If I can’t, all I have is a lump of clay in my hand, whether I’m inspired or not.” Träxler sums up by saying: “To turn inspiration into a success story, a great idea has to be combined with craft feasibility.”



The discussion between Michael Träxler and Katharina Mändlinger took place in the stimulating ambience of the Bauhaus-Archiv in Berlin, Germany. Jürgen Röhrscheid photographed the encounter.



CREATIVE

Inventive, full of ideas, witty, ingenious, imaginative, artistic, innovative, productive, constructive, original, brilliant, scintillating, exciting, stimulating, gifted, skillful, refreshing, profound, fertile, stylish, active, passionate.

“Creativity demands freedom”



Artist Emil Schult welcomed author Nina Voigt and photographer Stefan Wildhirt to his new studio.

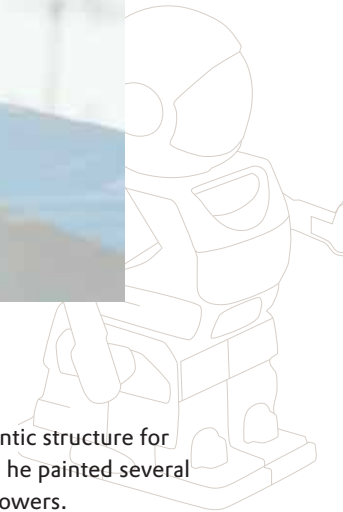
Emil Schult recently moved his studio to a plain brick building, where children living in the surrounding apartment blocks throw snowballs against the windows in winter. Schult finds that amusing: “Sometimes they really bombard me!” The 64-year-old artist, who is widely traveled, says the location of his studio is of no importance for his creativity: “I always take my intellectual baggage with me.”

His baggage contains a sizeable portion of curiosity and the talent to express himself via many different art forms. “Creativity is a gift that is not given to everyone,” he

says quite unpretentiously, but secure in the knowledge that he himself possesses this gift. Creativity can only be learned to a certain extent, believes the former star pupil of Joseph Beuys, who nowadays creates works using the reverse glass painting.

Works on the history of microelectronics can be found hanging in his studio. One shows two enlarged microchips implanted into a human cell. Human control via technology, questions of power and abuse “are aspects of creativity that should give us pause,” believes Schult. So the gift of





creativity also implies responsibility. “In my view, a creative individual does not create something that will destroy us all.” Creativity in his eyes is an emancipatory tool that enables humankind to advance culture. For this, one element is essential: freedom. Only if we are free can we be genuinely creative. Otherwise, creativity is tapped for a specific purpose.

The key theme of Kraftwerk, the rock band for which Schult wrote lyrics and

designed album covers in the 1970s, still occupies him today: modern technology and its relationship with human beings. Schult, who calls himself a “visual person,” accesses the world via pictures. Drawings and photos inspire him to produce his own works. He can take these with him wherever he goes. In his laptop, he has stored a whole folder of pictures that might provide ideas for paintings. He found a photo of Petronas Towers in Kuala Lumpur, Malaysia, so fascinating that he ended up flying

there to see the gigantic structure for himself. Afterwards, he painted several pictures of the two towers.

“Creative people don’t have tasks set for them, they do that themselves,” says Schult. As a child born in the post-World War II era, he learned to respect natural resources. Necessity is the mother of invention – for Schult, this proverb is the key to creativity. “We made something out of the little we had.”

“Creative people don’t have tasks set for them, they do that themselves.”

In the 1980s, Schult exposed himself to this situation anew, this time on purpose. For 10 years, he lived on an island with 500 inhabitants in the Bahamas. “I built a house, dug a well and fed myself, all without help,” he reports. Original creativity for him means: “An ape takes a stone and uses it to crack a nut, to get ahead.” His devotion to reverse glass painting also dates back to a creative moment of this kind. To produce a film on the progressive destruction of the ecological balance,

Schult wanted to confront sea dwellers with increasingly rare species that share their habitat, like stingrays and turtles. He painted the animals on sheets of PLEXIGLAS® and displayed them under water. To carry out this crazy idea, Schult acquired a new painting technique. “So it just goes to show that creativity can produce beauty and reflect truth.”



Dipping into other worlds, creating something new, realizing creative ideas – as shown at Expo 2010 in Shanghai, China. The diversity of PLEXIGLAS® gives color and shape to inspiration.



REFRESHING

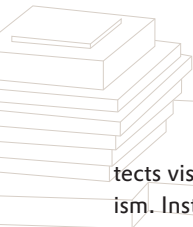
Invigorating, stimulating, pleasurable, delightful, beneficial, encouraging, fresh, bright, witty, exciting, varied, creative, infectious, cheerful, inventive, sparkling, passionate, inventive, astute, lighthearted, entertaining, insightful, quick to learn, intelligent, flexible, surprising, new, different.



“To think that you could do something useful and be part of the great arts, that was truly revealing for me.”

Photographer Peter Hurley visited César Pelli at his office in New Haven, Connecticut, USA. The text was written by Jeff Jahn.

César Pelli, one of the world’s most renowned architects, is surveying over a foot of new snow at his home in New Haven Connecticut. Pelli says, “It’s a hackneyed phrase but it is a winter wonderland. It is always magic, so clean, fresh and new. It covers all of the imperfections, but still I feel most at home at my office with my staff, working.” That work, like the Petronas Towers, doesn’t consist of a signature style. Instead, his commissions are shaped more by the environmental constraints and surroundings. This responsiveness to refreshing new materials and sustainability standards has made him one of the world’s greenest architects with recent projects like the LEED platinum rated Iberdrola Tower in Spain. Originally from Argentina, Pelli’s first great moment of inspiration occurred in 1944 when two young archi-



tects visited his school to discuss modernism. Instead of temples and palaces they spoke of efficient building offices, homes and factories that were, "Very simple and beautiful." Pelli also notes, "It was also connected to what was going on in modern art, which was very exciting with Picasso, Matisse and Mondrian." What's more, "To think that you could do something socially responsive and useful and at the same time be part of the great arts, that was extraordinary and truly revealing for me."

When asked about what has changed since then, he laughs, "Everything. There have been great gains and losses. One of the things we lost was that great faith that architecture transforms the world. On the other hand new concerns like sustainability and conservation were unknown at that time." Pelli also says that until recently, "We treated energy like it was inexhaustible. Now three quarters of our clients want a sustainable building. There is a sense that having a sustainable building is valuable in that potential tenants or buyers of condominiums want them."



It is as if "sustainability" has refreshed the earlier goals of Modernism. And often his clients ask for a LEED silver or gold sustainability certification. "Sometimes they even ask for platinum, which is very rare. In order to do a LEED platinum building you need very strong collaboration with your client, suppliers and contractors." Pelli is inspired as clients and manufacturers are driving these new sustainable buildings. "For example what we think of as glazing materials today has nothing to do with the glass of the 1950's. In the 50's glass was monolithic with nothing to help



„We may see great advances in the next four years in mechanical systems.“

it except being a bit tinted, now transparent materials are insulated and have coatings.” In the future, Pelli hopes for even more refreshing possibilities. “We may see great advances in the next four years in mechanical systems.”

Two of Pelli’s current projects are visually impressive, yet refreshing in how they adapt to radically different climates, “We are almost finished with a building in Bilbao, Spain, for an energy company (Iberdrola). The building is all windows but we have a double outer wall and a

system of shades with sensors that tell them when to come down. We have another building in Seville, Spain, starting construction (the Casajol Tower). Bilbao has a mild climate, whereas Seville is a bit like Northern Africa, so the building has to have very deep sun shade. There is so much shade from the louvers that the sun will almost never touch the windows, all of which is quite different than the one in Bilbao.”

Pelli is inspired by this new climate of innovation and responsibility, “I hope it keeps on being so fantastic.”



Photo: Sunnovation GmbH

Using the sun as a power plant makes for sustainable living. PLEXIGLAS® Solar helps to tap this energy using photovoltaic panels.

PASSIONATE

Fervent, ardent, eager, zealous, inflamed, intensive, stormy, unfettered, furious, impulsive, temperamental, agile, fixed, capricious, intense, vivacious, insistent, vehement, euphoric, dashing, infectious, industrious, resolute, pathbreaking, energetic, creative, fascinated, alert, refreshing, impudent, wholehearted, fired with enthusiasm, full of zest.

“Success is realizing a vision”



Franz-Peter Strohbücker spoke with Dr. Wolfgang Huhn, Head of Audi's Light and Visibility Department, at Audi's museum mobile in Ingolstadt, Germany. They were filmed by Ian Georg Strohbücker.

Automotive engineers who don't feel a passion for their work might as well be dead. That is Dr. Wolfgang Huhn's opinion. For Huhn, who has dedicated himself single-mindedly to the subject of lighting since his studies, the passion he devotes to his projects is the key to success. He defines success as "realizing a vision." The best example is the introduction of LED headlamps in cars, which he has been promoting energetically for a number of years.

Where does he get his motivation from? Is it his calling to do everything with passion, using all of his mental powers, energy and love? While Huhn can subscribe to the part about mental powers and energy, he dislikes the reference to love. He loves his wife and family, he says, "but that is a completely different kind of love than the one you feel for your job." But his eyes shine like two full-beam headlamps when he talks about light. Looking at him, you understand why passionate people are so





infectious. They are gripped by an idea, enthuse about it, discuss it and convince other people, who end up sharing the same passion. Full of enthusiasm for light-emitting diodes (LEDs), Huhn was able to kindle interest in full LED headlamps at Audi in Ingolstadt, Germany. He was convinced that Audi could acquire a completely unique profile by using LED lights that stay switched on during the day. "That was fantastic," Huhn enthuses, and tells us how, working together with external lighting specialists and a series of

experimental models, he edged his way towards this goal, with the result that Audi presented a prototype in 2006 and was the first manufacturer to launch LED technology in mass-produced vehicles in 2008.

Passionate people also have a special kind of energy that leads to undreamt-of dynamics. "Suddenly, the impossible becomes possible," Huhn says, thinking of a very specific project. It was the beginning of 2010, and the legendary 24-hour-race in Le Mans was due to start in June. But the

Audi race car didn't have characteristic LED headlamps yet. That was completely out of tune with the company's progressive image. Without further ado, Huhn and his team modified serial headlamps to meet race car specifications. The result was an Audi race car with a dynamic set of LED "eyes."

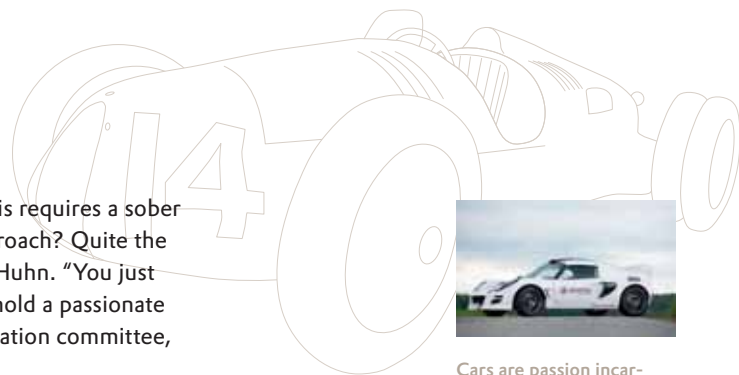
But what makes the subject of automotive lighting so exciting for a man like Huhn, who originally wanted to develop industrial robots? It was the realization that in this

“Suddenly, the impossible becomes possible.”

field “every 10 years everything is overturned and real innovation is possible. Just think of halogen light, xenon light and LED headlamps.” Experiencing such change, helping to shape and promote it, is a fascinating prospect even for someone with a doctorate in electronics. Even if putting visionary ideas into practice is sometimes laborious, or they threaten to be stymied by bureaucracy. All the lighting engineering aspects of a car are strictly regulated. Every lamp, reflector and cover has to comply with a myriad of standards

and regulations. So this requires a sober and dispassionate approach? Quite the opposite, contradicts Huhn. “You just have to stand up and hold a passionate speech to a standardization committee, for example.”

If passion is a fire, as some poets say, we can be sure this fire will go on burning for some time yet. Or shining, to stay with our picture.



Cars are passion incarnate, developed by designers searching for new shapes and an individual look. PLEXIGLAS®: lightweight construction and light for favorite cars.



EXCITING

Stirring, moving, thrilling, rousing, stirring, fascinating, overwhelming, gripping, passionate, full of suspense, charged with tension, stimulating, interesting, inspiring, infectious, refreshing, unusual, creative, fantastic, bubbly, racy, tremendous, splendid, phenomenal, brilliant.



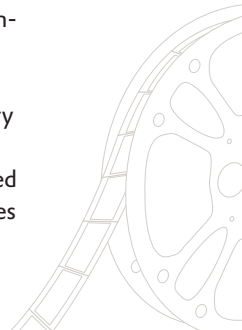
“The most exciting medium in the world”

At the heart of every fascination is the wondering child. This child is the essence of all discoveries, dreams and inventions. That is why almost all stories that tell of enthusiasm for movies begin with a journey back to childhood.

The childhood of a moviemaker, for example, who once entered the solemn dark of the picture palace with bated breath. The subject matter is irrelevant – a flying elephant or a boy who went to a school of wizardry and had to conquer the forces of evil before he could grow up.

Or the childhood of a movie director: François Truffaut, who fled from dreary reality to the cinema and stole posters to set up an altar to his favorite stars and dreams. Martin Scorsese, the boy who suffered from asthma, who learned the dialogs of his favorite films by heart and “made” his first imaginary movies

Movie critic Georg Seeßlen tells of the exciting world of the cinema. The photos were taken by Johannes Simon at Bavaria Filmstadt in Munich, Germany.



“Cinema holds within itself the urge for innovation.”



with cardboard cutouts. Steven Spielberg, who filmed the original versions of his world successes in suburban gardens and bowling alley parking lots as a teenager, using his dad's Super-8 camera.

When Orson Welles was new in Hollywood, he said, full of enthusiasm on his first visit to a studio, that it was like offering a child all the toys in the world, and letting it do whatever it liked with them. Welles would go on to show that you can

make very adult movies based on this childlike enthusiasm. And he would learn that the second part of his sentence was not quite true.

The infectious nature of the movie can also be felt in the enthusiasm of its pioneers, who developed the first true technical art 120 years ago: the Lumière brothers, who frightened their audience with the picture of an approaching train; Georges Méliès, who sent his heroes to the moon and to hell; the slapstick artists Chaplin, Keaton,

Laurel & Hardy, who translated the hectic pace of the new age into movement and comedy. There is not one moviemaker of the present who would not bow down before the masters of cinema's early days.

But perhaps it is wrong to speak of "the" fascination of movies, since this fascination takes a variety of forms. Cinema also encompasses all other art forms. It tells stories like a novel, plays like in the theater, "paints" with cameras and light like in the pictorial arts, composes like music, erects



architecture, explores landscapes, illuminates every corner of the human soul. Added to all this is technology, organization, enormous tension, familiarity and enthusiasm. It is the art of turning the wondering child into an efficient craftsman, of transforming adventurous ideas into technically feasible images.

Cinema differs from the media it contains and continues in one essential aspect: it holds within itself the urge for innovation. Movies constantly acquaint us with new

forms of perception and new technologies like the railway, the telephone and the airplane. They also excel at presenting the most fascinating recent developments: the ability to penetrate the secrets of the organic world, the ideas of virtual reality and the pictorial conquest of three-dimensionality. So a visit to the cinema is both a return to the wondering child inside us and a glimpse into the future.



Photo: Samsung

Gigantic flat-screen televisions with PLEXIGLAS® make movies a thrilling experience at home. Over 90% of LED televisions are equipped with light-guide plates made of PMMA, which exclude any diffusion losses.

The stuff of visions



He researched, tested, failed and started again. Untiringly. With never-ending inspiration: the pioneer of PLEXIGLAS®, Dr. Otto Röhm.

1933. A laboratory in Darmstadt, Germany. Dr. Otto Röhm has spent many years researching into special polymers with the aim of creating a kind of transparent rubber. Like so many times before, he pours an experimental compound between two sheets of glass and puts this compound on the windowsill before closing shop for the day.

Next morning, imagine his amazement: the new polymer on the windowsill is hard, crystal-clear and can be easily detached from the sheets of glass. Otto Röhm is perplexed. So it wasn't hard for him to choose a name: PLEXIGLAS® dates back to this moment, both as a product and a trademark. Röhm was a visionary, a man who

was ahead of his time. He realized early on that a good material needed a good name, and applied for trademark protection. After all, he said to himself, users would rather call a product PLEXIGLAS® than X104b. How right he was.

2011. PLEXIGLAS® is one of the world's most famous brands of plastic. It has become the embodiment of acrylic (chemical designation: polymethyl methacrylate, or PMMA for short). Development engineers are still working on new visionary ideas for using this material today. They keep trying out new products, rejecting some and improving others. They look outside the box for inspiration and innovative ways

to realize projects that would not be possible without PLEXIGLAS®. That is what continues to drive them. In their heads, they create whole new worlds. “We produce material for inspired minds that shape the future,” says Dr. Viviana Steiner, Brand Ambassador at Acrylic Polymers. “We set ourselves no limits, and we hope our customers don’t either.” Isn’t that rather out of touch with the real world? No, she doesn’t think so. “We look to the future without forgetting our origins. That is what makes us unique. Our actions are based on reliability and quality.” Otto Röhm would certainly have agreed with that – and maybe he’d be perplexed all over again.



Two brands, one product: Evonik markets PMMA molding compounds and sheet materials in the Americas under the ACRYLITE® trademark. Everywhere else in the world, the trademark is PLEXIGLAS®. This is because of the separation of the German and American branches of the business after World War II.

PLEXIGLAS® is an extremely well-known brand. In France and Italy, for example, 100% of B2B customers are familiar with the brand, compared with 99% in Germany and 97% in Spain. PLEXIGLAS® is also well known in China, by almost two thirds of the people.

The PLEXIGLAS® family

The PLEXIGLAS® family contains 14 brands. Their names are self-explanatory and refer to the key property of the relevant material.

PLEXIGLAS® Alltop
PLEXIGLAS® Heatresist
PLEXIGLAS® Heatstop
PLEXIGLAS® Hi-Gloss
PLEXIGLAS® LED
PLEXIGLAS® Mineral
PLEXIGLAS® Optical
PLEXIGLAS® Reflections
PLEXIGLAS® Resist
PLEXIGLAS® Satinice
PLEXIGLAS® Solar
PLEXIGLAS® Soundstop
PLEXIGLAS® Textures
PLEXIGLAS® Wood

PLEXIGLAS® is not just another plastic. It combines a plethora of properties and offers a unique range of solutions for highly specific applications. From impact-resistant and heat-reflecting to special surface textures, wooden look-and-feel to solar applications: over the years, the PLEXIGLAS® family has produced specialists for the most diverse requirements. These have now been grouped together under names that reveal the material's key property at first glance. "The family brands make for uniform presentation worldwide," explains Brand Ambassador Dr. Viviana Steiner. "They apply equally to molding compounds and sheet material and to our two trademarks: PLEXIGLAS® through-

out the world except in the Americas, where we market our products under the ACRYLITE® trademark." This makes it easier for customers to find the product they seek, as they can see right away what the name stands for. PLEXIGLAS® Satinice, for instance, denotes light-diffusing materials with a matte satin surface; PLEXIGLAS® Textures refers to the surface structure. Dr. Viviana Steiner: "The new uniform brand families make PLEXIGLAS® fit for the future. They also enable us to meet customer wishes for a clear and easy-to-understand nomenclature."



PLEXIGLAS® 

Making its mark on the future. A good signature brand mark always captures the essence of a brand. It expresses and visualizes what a brand embodies, what it represents, and what makes it special. And it does so in quintessential form, for a brand mark constitutes the maximum degree of visual condensation of a brand. "Brands are energy," says Ben Rüniger, the owner of XEO, a brand agency. "And brands thrive on the intensity of the emotions they elicit." The same is true for the brand mark – which has to be more than just legible and compelling in terms of its color or graphic visuals. It needs to make the essence of the brand perceptible to the beholder.

"PLEXIGLAS® is an inspirational material, a plastic that can be used to shape the future," says Rüniger. "Meaning it is full of dynamic to inspire infinite possibilities." To underscore this fact, PLEXIGLAS® is launching a new brand mark. As they steadily increase in size, its three curved elements open themselves up to join beholders on their journey to inspiration. The new brand mark for PLEXIGLAS®, the Swing, symbolizes openness, dynamism and boundless creative versatility.

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