



GLASMALEREI PETERS STUDIOS ART, GLASS & ARCHITECTURE



PETERS STUDIOS ARCHITECTUAL ART GLASS

In 1980, my father, Wilhelm Peters, took over the general management of our glass-painting business. Today, he and I manage the business together. Wilhelm Peters studied art and art educational science in Hamburg, and it was there that he became renowned as an exhibition manager and author, before taking over the workshop in Paderborn. He feels equal obligation to traditional and modern arts. His passion belongs to the arts and the artists, to progress, and to Plus ultra (Further beyond). With him, our glass painting business has grown steadily and continues to do so: New concepts, new buildings, new workshops, an artists' gallery and apartment have made Peters Studios into a renowned workshop in Europe and Internationally.

"Further beyond" also applies to the company management tradition. In 2008, I joined in the management of our business as a fourth-generation member. During my dual studies as a business manager, I worked in the processing of glass - with particular emphasis on glasspainting – and I gathered practical experience in the various glass processing businesses across the world. My sister, Christine Peters, a business manager with international experience, also joined the company team as a fourth-generation family member.

We are very happy about our status as a healthy family business and, together with all of our staff members, we feel that we make a really good team and we look forward to new, exciting challenges.

JAN-WILHELM PETERS General Manager, Peters Studios



U.S. REPRESENTATION PETER KAUFMANN

Peter Kaufmann joined Peters Studios in 2004 and immediately started to further develop the North American market. Peter has over 20 plus years of experience in business development, marketing, public relations and advertising. Previous to joining the Peters team he worked for Bullseye Glass Company as the international sales and marketing director. Since joining Peters Studios he has worked diligently to re-establish Peters as one of the leaders in the North American market.

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INTRODUCTION

By any measurement, public art in the United States has exploded in the past three decades. The field has stretched well beyond its traditional roots in murals, monuments and memorials to encompass a broad spectrum of creative investigations in the public realm – fixed and ephemeral; visual and performative; top down and bottom up. There are more than 350 government-sponsored programs, dozens of art on campus programs, and countless nonprofits and independent groups engaged in the field. This doesn't include liturgical and corporate-sponsored art, or the transit- and health care-related programs across the country – all of which are showing signs of growth. And we can't begin to count all the DIY street art activity – the flashmobs, yarnbombing and all-night festivals – nor all the community engagement efforts that creatively address some of the biggest challenges facing cities today. As the publisher of Public Art Review, let's just say it's hard to keep up.

There are a few themes that characterize public art today. For most publicly funded programs, the art can't simply be aesthetically pleasing – it has to be functional or serve some larger purpose. This can range from artful railings to projects that clean up the environment. Artists are also seeking ways to exploit new technologies, such as data visualization, 3D printing, smartphones and LEDs. And today, sustainability is more than a buzzword; almost every industry on the planet is aware that we all need to share the planet, and if we want it to last we all have a part to play. Artists, often in collaboration with other sectors, are finding ways to reduce, reuse and upcycle materials, harvest renewable energy and raise awareness of environmental issues. In fact, artist-architect collaborations are where much of the innovation is taking place today. As designers and creators of built environment, as well as designers of experiences, artists and architects have a lot in common. In spite of this, artists are often brought into building projects late in the game or after the fact, to put a "Band-Aid" on a problem spot, or plop a sculpture on a pre-determined pad. This is not best practice, but symptomatic of unenlightened architects, oversized egos, or a lack of thoughtful policies by the developer or city agency.

Some of the best examples of public art today are the result of thoughtfully planned and well-executed artist/architect collaborations incorporating contemporary glass art. With glass art's ability to serve multiple and simultaneous functions, not to mention adding stunning aesthetic richness to any environment, it's no wonder so many artists and architects are gravitating to this corner of the public art field. Public art agencies and private developers are likewise drawn to glass art as a strategy given its high impact – inside and out – and its virtually nonexistent maintenance requirements. And today, with new technologies and skillful fabricators, much of the guesswork is removed from the equation. Indeed, it's hard to overstate the value added by a facilitative fabricator in the success of artist/architect collaborations.

As a former glass artist myself, with a few commissions well behind me, I have a particular fondness for the medium, and have been fascinated by the technological and engineering advances that have brought glass art from the margins to the center of the public art world. So it's no surprise that I've been following the work of Peters Glass for more than 25 years, and each year I've witnessed new surprises and daring innovations. This could be in the form of scale, or use of cable supports to the application of colorful splashes that make the work painterly, or the innovative sandwiching of solar batteries as an integral design element, elevating the importance of public art as we strive to reduce our carbon footprint.

I've had the pleasure of seeing several Peters Studios projects in person, including a stunning, 100-foot high sculptural glass vortex in the atrium of a university building and a chapel with the richest yellow-colored windows I've ever seen, but it was a great thrill to actually visit the Peters studio in Germany and see where some of the "magic" takes place. The people and the facility both felt at ease, and quite modest, and it became apparent to me that all of the focus is on the art and the rewarding relationships that the art makes possible. When I now look through these pages and wonder at so many impressive projects, I start imagining the stories of the relationships that they represent, and I find new meaning in the work. Like the medium of glass itself – a liquid mass that's all about light, color, reflection and refraction – there's much more to glass art than meets the eye.

Jack Becker is Executive Director of Forecast Public Art and publisher of Public Art Review magazine (www.ForecastPublicArt.org)



Studio in Paderborn

OUR HISTORY

Started in 1912, Glasmalerei Peters Studios is now in the fourth generation of ownership. The current owner, Wilhelm Peters, became involved in the mid 1980s and really started looking at contemporary art and modern techniques as the future of the industry. It is his openness and collaborative spirit that really took the studio to the next level. Every challenge is welcomed as we find the best solutions always come through an open and honest collaboration between the artists, artisans, project manager and even the owners.

Some of the first projects in the U.S. began in the late 1950s and early 1960s as Peters Studios partnered with a few U.S.based stained glass studios.

Peters Studios has stayed on the cutting edge of the industry, keeping up with the latest technology, materials and equipment. While we are still steeped in history and tradition with our Restoration Department, we are finding most work going the way of modern techniques. This includes new glass painting colors, new fabrication techniques and an investment in the largest kilns on the market. We have worked hard to create the most comprehensive state-of-the-art fabrication facilities in the world and continue to look for ways to improve.

Among many other firsts, Peters Studios was the first to work with solar engineers in combining art glass with Building Integrated Photovoltaic (BIPV) technology. We have since developed a great number of projects that are not only aesthetically beautiful but are also environmentally sensitive. Art glass that creates energy is just another example of how Peters Studios continues pushing the envelope of the possibilities of architectural art glass.

The possibilities are as vast as your imagination. We pride ourselves on solving complex technical and artistic problems through collaboration and experimentation. We like to think that we learn as much as we share and with every project there are always steps forward.

PROJECT MANAGEMENT

From the start of every project through the delivery and installation, our team of experts will work closely with you in collaboration each step of the way.

This typically starts with selecting the best techniques to match your original artwork. By understanding the steps used to create the original artwork we can then identify the art glass fabrication techniques that can best translate your design.

This includes color matching through the development of samples and studies as typical first steps. This becomes the basis for open communication and collaboration moving forward to the start of final fabrication.

The team includes a Project Manager and a skilled craftsperson who both work closely with you to ensure the successful translation of your original work into glass.

The Project Manager works closely with you from the start to identify and meet the existing budget for the project.

The Project Manager assists with not only ensuring the best translation of your work but also handles all the technical requirements for the project. This includes communicating with the client and the project team to ensure we receive correct dimensions and technical requirements for the glass. Our team will stay in close communication with the client to make sure the timeline and milestones are met.

Through each phase of the project our team will provide updates of progress through email, phone calls and images of the work progressing.

OUR FACILITIES

Peters Studios has two locations for their state-of-the-art workshops. The original studio, which is in the heart of Paderborn, Germany, is the base for our traditional stained glass and world-acclaimed Restoration department.

Just down the road on the outskirts of Paderborn, in a small village named Neuenbeken, we have renovated three old farmhouses which now house one of the most cutting-edge art glass fabrication facilities in the world.

Our facilties and our staff members, who work together with and for artists from all corners of the world, form the heart of our company. This is where our enthusiasm for glass creation comes to life and our passion for glass-art is almost tangible in each and every room of our workshops.

Our staff are not only passionately involved, they are also highly qualified. You will find specially trained experts in all disciplines of traditional and contemporary art glass fabrication techniques. We don't just experiment and research with huge enthusiasm, but with success too: Our joint projects with renowned research institutes on silicate or photovoltaic research speak for themselves.

However, as much as we love anything modern and innovative, we are just as attached to the traditional roots of our craft. Traditional stained glass with lead glazing, medieval glass, restoration and reconstruction still make up a large share of our work. Due to the ever-changing and developing demands of glass design and its potential, we constantly expand and modernize the equipment in our workshops. You will find that our worksites are equipped with the latest state-of-the-art technical facilities whether it be the latest 3D mapping system to best assess the makeup of glass made in the 13th Century that needs to be restored or the top-of-the-line filtration system installed in our airbrushing room.

Studio in Neuenbeken

PADERBORN TECHNICAL FACILITIES:

- Glass-cutting room
- Lead glazing workshop
- Mosaics preparation and assembly room
- Airbrushing room
- Sandblasting chamber
- Architectural plotter for enlargements of drafts and one-to-one printouts
- Specially furnished restoration rooms complete with state-of-the-art ventilation
- Digital documentation room complete with multiple digital cameras, SLR-cameras and 6x6 cameras, microscopes and an aerosol nebulizer
- Art gallery and screening room for events and lectures

NEUENBEKEN TECHNICAL FACILITIES:

- Fully automatic sandblasting equipment
- Multiple kilns ranging in size with the largest kiln able to process glass 8.5' W x 20' L
- Three completely equipped, large airbrush rooms with state-of-the art filtration systems
- Acid etching room
- Three architectural plotters for producing vinyl masks used for etching, sandblasting and painting
- 'Michelangelo' digital printer for printing with ceramic enamel paints
- Digital printer for direct printing onto glass
- Fully equipped screen-print room
- Viewing hall with large window (80' W x 20' H) for mounting, displaying and inspecting large sections of glass
- Exhibition room and gallery with seating capacity for up to 120, complete with modern technology, including video screens, projector and sound



Artist gallery in Paderborn

The Techniques: Anything is possible. Put us to the test.

We will provide you with a great variety of possibilities to help you realise your ideas. In cooperation with you, we will develop individual technical solutions for each specific project, and will compile various drafts.

The spectrum of possibilities is almost unlimited. While we might trust traditional techniques as the basis for a particular project and develop these creatively, we might, on another occasion, combine new, innovative techniques and achieve totally new results.

Give us your creation and put us to the test: We are more than keen to develop ideas to achieve perfect technical implementation each time. So that, at the end of the day, you will be convinced by the result.



Design





Laminated Antique glass





Silk screened





Hand painted



Airbrushed



Fused



Digital printed



"FLIGHT" AND "THE SPIRIT OF HONG KONG" HONG KONG INTERNATIONAL AIRPORT, HONG KONG, CHINA

DESCRIPTION: The theme of "Flight" is the powerful visual experience that is the sky. Wrapped around our planet, this thin skin of air provides the lifeblood of our existence as well as a permanently shifting and changing visual experience. It is composed of winds and high speed air currents, of clouds with life-giving moisture and streaming rain.

"The Spirit of Hong Kong" is inspired by the idea that is the heart of Hong Kong. This island city is one of those melting pots of the world, creating a dynamic spiral of energy, a vortex of life and movement. Red and yellow are the dominant colors, and they swirl together creating a vortex of power and energy.

TECHNIQUE: Backlit layers of toughened and laminated glass. The glass has been slumped to create the rich surface texture, and then airbrushed with fired transparent glass enamels.

CLIENT: Airport Authority Hong Kong ARTIST: Graham Jones ARCHITECT: Aedas









"INDEX" HIGHLAND HILLS BRANCH LIBRARY, DALLAS, TEXAS

DESCRIPTION: "Index" is defined as an indicator, sign, or measure of something. Index cards were used in libraries before computers became so readily available, to help patrons find what they were looking for. It was a physical representation of another object. This piece was designed to be an index of the Highland Hills community. The silhouettes on each panel are photographic representations of members of the community screen printed onto glass in layers and kiln fused together.

TECHNIQUE: Airbrushed and screen-printed colored vitreous enamels permanently applied to float glass and assembled into an insulated glass unit.

CLIENT: Office of Cultural Affairs, City of Dallas ARTIST: Letitia Huckaby ARCHITECT: KAI Texas







"ARBOR WINDS" STADIUM BRIDGE PUBLIC ART, ANN ARBOR, MICHIGAN

DESCRIPTION: "Arbor Winds" evokes not just trees but wind and light as expressions of the energy that surrounds us. In each panel we see the ghostly afterimage as if the wind has blown the tree; we see both moments in time simultaneously. These images etched in glass are like those etched in our memories. We walk through a forest and it is our mental "snapshots" of the branches against the sky or the texture of the thick trunk, or the dense layers of the many trunks silhouetted against the forest underbrush that remain in our memories. Indeed, each of these etched images is more the memory of moments rather than a physical reality: a subtle expression of our own ephemeral existence and the light traces we leave behind.

TECHNIQUE: Laser etched safety glass

CLIENT: City of Ann Arbor **ARTIST:** Catherine Widgery





"SKY VEIL" ogden juvenile courthouse, ogden, utah

DESCRIPTION: Dichroic glass lines the mullions over the fourstory facade. "Sky Veil" transforms the courthouse environment for those who go there in a time of sorrow and stress. The glass curtain wall that slices through the volume of the building and creates beautiful lobbies outside each courtroom is the most dramatic element in the architecture of the courthouse. "Sky Veil" introduces color and interactivity with the surrounding landscape in these spaces so the surroundings are experienced through a new lens and the complexity of fragmented reflections challenges the mind to become alive to its environment.

TECHNIQUE: Laminated dichroic glass.

CLIENT: Utah Division of Arts and Museums ARTIST: Catherine Widgery ARCHITECT: VCBO Architecture











"SKY CYCLES" BART WARM SPRINGS STATION, FREMONT, CALIFORNIA

DESCRIPTION: "Sky Cycles" weaves images from different times of day, different times of year and different points of view into single images that are in turn woven into the present moment, the actual sky from the point of each viewer. The artist used photographs of Pioneer Mountain, Elizabeth Lake, and the surrounding areas taken and posted online by residents and visitors. The piece captures the sense of seeing the whole area through the eyes of those who walk and live here at many different times of day, different times of the year, each a unique moment in time, a unique experience.

TECHNIQUE: Multiple layers of airbrushing combined with semi-transparent mirroring.

CLIENT: Bay Area Rapid Transit ARTIST: Catherine Widgery ARCHITECT: Robin Chiang & Company









"WAITING FOR TOYDOT" LIRR MASSAPEQUA STATION, MASSAPEQUA, NEW YORK

DESCRIPTION: Drake used 1930's miniature lead figures from his father's model railroad collection to represent a group of people who appear to be waiting on a station platform for a train to arrive.

"Some of my fondest memories of growing up on Long Island are driving to the train station with my family in the morning to drop my father off to work. He would make a big production of waiting to the last minute to jump on board. We returned every evening to pick up my father and even as a child I had the sense that this was his reward for working hard every day in the city." Drake tips his hat to the Fitzmaurice Flying Field in Massapequa Park by including a Bremen airplane to reference James J. Fitzmaurice's historic 1929 trans-Atlantic flight.

TECHNIQUE: Hand-painted and airbrushed colored vitreous enamels applied to security glass.

CLIENT: MTA Arts and Design ARTIST: Peter Drake ARCHITECT: Aecom









"AZUSA HORTICULTURAL PARADISE" THE FOOTHILL GOLD LINE, APU/CITRUS COLLEGE STATION, AZUSA, CALIFORNIA

DESCRIPTION: The hand-painted glass fan palm canopy, located on the train platform, commemorates Palm Drive's boulevard of palms. The design is an array of stylized palm fronds that suggest the effect of a thatched palm roof. The cooling colors of the glass canopy provide a refreshing place to wait for the train in the California sun. The allover color in the canopy produces a soft glow of colorful reflected light; at the same time it provides shade, and reduces harsh glare during the day. At night the canopy gives off a soft lantern-like glow.

TECHNIQUE: Hand-painted and airbrushed vitreous enamels on safety glass.

CLIENT: Foothill Gold Line Construction Authority ARTIST: Lynn Goodpasture









"SUMMER TREE AUTUMN TREE" TEXAS TECH UNIVERSITY, LUBBOCK, TEXAS

DESCRIPTION: Inspired by the calming power and healing potential of nature, "Summer Tree Autumn Tree" is a hand-painted, double-sided art glass window for the Burkhart Center for Autism Education and Research at Texas Tech University. The exterior pane at the building entrance depicts an autumnal scene in golds and oranges, while the interior pane portrays a lush, green treetop scene. A superimposed grid subtly emerges throughout the image, relating to the building's exterior brickwork and also creating a puzzle-like quality in reference to the symbolic puzzle-piece of autism. As lighting conditions change throughout the day, the artwork displays either one season or both seasons simultaneously.

TECHNIQUE: Multiple layers of airbrushed vitreous colored enamels combined with semi-mirrored glass to form an insulated glass unit (IGU).

CLIENT: Texas Tech University ARTIST: Corinne Ulmann ARCHITECT: SHW Group









"INHERITANCE: IN MEMORY OF AMERICAN GLASS" DITMAS AVENUE SUBWAY STATION, BROOKLYN, NEW YORK

DESCRIPTION: "Inheritance" references patterns derived from those of American household glass objects, including Depression glass, carnival glass, and early American pressed glass. The overarching compositions of each set of windows references the symmetry found in stained glass windows of gothic and gothic revival architecture. The sandblasted details of the glass create areas of shadow and light, not unlike the function of tracery found in gothic churches.

TECHNIQUE: Multiple layers of screen printing with colored vitreous enamels combined with sandblasting worked into safety glass.

CLIENT: MTA Arts and Design ARTIST: Cara Lynch ARCHITECT: MTA New York City Transit









"RIDE ON" winona state university, winona, minnesota

DESCRIPTION: The design allows for thought, interpretation, and reinterpretation many times over: One might read it as flowing water, a waterfall, waves of the mighty Mississippi, or waves of "success." One might just as easily see it as an elegant triumphal arch, hovering above the entrance hallway.

The floor design evokes yet more waves, corresponding to the glass waves above. These seven elements are a reference to the seven dimensions of wellness.

TECHNIQUE: Dichroic glass with laminated jewels and bevel.

CLIENT: Winona State University ARTIST: Alexander Tylevich ARCHITECT: Holabird & Root







"OPEN DOOR" AND "WAVE OF KNOWLEDGE"

LORAIN COUNTY COMMUNITY COLLEGE, ELYRIA, OHIO

DESCRIPTION: "Open Door" is sited as a beacon in the Lorain campus landscape. "Wave of Knowledge" extends the metaphor visually across the glass facade, suggesting the beautiful educational journey and boundless exploration expressed in a bright gradient of color. "Open Door" and "Wave of Knowledge" are crucially present at the threshold of the Richard Desich SMART Center for Microtechnology, a state-of-the-art facility devoted to the exploration of design, technology, and innovation. Both "Open Door" and "Wave of Knowledge" are luminous works by night and central icons by day, activating the daily entrance that students and faculty pass through.

TECHNIQUE: Airbrushed vitreous enamels on float glass.

CLIENT: Lorain County Community College ARTIST: Shan Shan Sheng ARCHITECT: Clark & Post Architects Inc.







"SINGING THE LIGHT" greenwood college school, toronto, ontario, canada

DESCRIPTION: "Singing the Light" is an integrated artwork 60 feet high by 18 feet wide continuously spanning five floors. The trees, root systems, eight spirit house colors, birds and light are an allegory for the school community. Sarah's artwork uses stylized, dynamic and dramatic forms to contribute energy and vibrancy to the space. The trees speak to the role of the teachers and staff with their grounded outreach and sheltering branches. Moving around and through the branches are the birds in spirit house colors creating a connection to students. The richly colored root system celebrates the founders of the school. On each floor the viewer experiences the interplay of transparent, translucent and opaque glass – giving a sense of layered depth, and mystery.

TECHNIQUE: Ceramic digital printing laminated with air-brushed enamels; tempered glass drilled, frameless mounting.

CLIENT: Greenwood College School ARTIST: Sarah Hall ARCHITECT: Montgomery Sisam Architects









"REPEAT MELODY" SAN FRANCISCO GENERAL HOSPITAL, ACUTE CARE UNIT, SAN FRANCISCO, CALIFORNIA

DESCRIPTION: In creating "Repeat Melody" the artist worked directly with patients, visitors and hospital staff to develop the artwork's themes and color palette. Morales's imagery draws inspiration from photographs taken during this collaboration, capturing the variety of people and experiences that make up the community of General Hospital.

TECHNIQUE: Airbrushed vitreous colored enamels with sandblasting and hand-painted infill.

CLIENT: San Francisco Arts Commission ARTIST: Julio Cesar Morales ARCHITECT: Fong and Chan Architects







"OMNES AURORA, OMNES MUNDI, OMNIA MOVENS" RTD FASTRACKS NORTH METRO LINE, AURORA, COLORADO

DESCRIPTION: The series title is "Omnes Aurora, Omnes Mundi, Omnia Movens" (translation: "All Aurora, All The World, All Moving"). This phrase, like Aurora itself, is both straightforward and is to be interpreted in a variety of meanings reflecting this multilayered and diverse community. Abstract elements hint at something that one can interpret of their own accord. One viewer might interpret a particular abstraction as the surrounding mountains whereas another might see it as open field of grasses and flowers, or simply an interpretation of movement and light; but all will ultimately be viewed in conjunction with the overarching idea that diversity is a great strength and we are greater at the times when we come together as one.

TECHNIQUE: Multiple layers of airbrushed vitreous colored enamels on safety glass.

CLIENT: Regional Transportation Distric of Denver ARTIST: George Bates ARCHITECT: Matt Druffel







University of Hawai'i West Oahu Library, Honolulu , Hawai'i

By day, Cycles is used for campus way-finding and works as a reverse painting on glass. Vibrant colours and metallics (gold and silver leaf) catch natural light and give movement as the sun arcs through the day. By night, the beacon glows from within and becomes a clock tower, with four animated light shows to mark every quarter hour. The Show is directed by a computerized astronomical clock within the 28 ft. tall, 4 sided tower. Cycles contain symbols that link to the past and reach towards the future. Ancient Hawaiian petroglyphs, found in the area connect past and present generations.

Physical characteristics in relationship to the mountains, the sea, the moon, and the sun are also present. A 12 ft. fingerprint indicates the mark the individual leaves on the school, and the school upon the individual - or it is reminiscent of agrarian fields of the area.

Artist: **Carol Bennett** Client: Hawai'i State Foundation on Culture and the Arts Architect: John M. Hara







"My first venture into stained glass with Peters was both exhilarating and daunting, as I am a self-taught glass artist, with each subsequent commission I'm thrilled to earn while I learn with their creative and instructive expertise."

Carol Bennett, Artist



"A-spire"

University of Minnesota Science Teaching and Student Service Center, Minneapolis, Minnesota

Two cable-formed cones reach toward each other. This cone of cables supports a spiral made of vivid dichroic glass. The spiral unravels above the third floor, untangling into codependent strips of dichroic glass, which follows the curves of the stairway and atrium-floor openings.

The lower installation develops up from the ground level. A web of cables holds a stainless steel spiral positioned in front of an array of letters, numerals and scientific symbols representing the fundamentals of science. The spiral itself contains images related to the subjects taught in the building. As part of the architectural treatment of the spiral, these images are embedded into recessed half-spheres of polished stainless steel.

Artist: **Alexander Tylevich** Client: Public Art on Campus / Weismann Art Museum Architect: Kohn Pedersen Fox







"Lighting the Way"

Southern Oregon University, Churchill Hall, Ashland, Oregon

For this public art project, the committee suggested several potential sites within the historic Churchill Hall, the original campus building at Southern Oregon University. I chose to create two sets of windows that would complement one another, one for each stairwell. Each window measures 7.5' tall x 2.25' wide.

My goal was to integrate contemporary techniques and concepts within the structure of this 86-year-old building in way that would endure for the next 100 years. The surface treatments for the site had already been determined by the architect during the renovation process, and my budget did not allow for new windows. Thus, the challenge was to create something that would harmonize with those earlier decisions and use existing architectural elements. I began my part of the collaboration by getting a feeling for the priorities of the selection committee before I created my proposal. I spent time on campus and in town assessing the spirit of the university. Through discussion with the architect, I came to understand the windows not be switched out. I worked with my fabricator to determine a means of installing the glass panels parallel to the existing windows in a way that would allow for circulation of air and ease of cleaning.

"Lighting the Way" creates an environment that calms and centers the viewer. During the day, the painted sky imagery and dot pattern overlay views onto the campus. They also project changing patterns on the walls, floor, and stairs depending on natural conditions. When seen at night, the illuminated windows provide the campus with color and additional opportunities for contemplation.

Artist: **Alex Hirsch** Client: Southern Oregon University, Oregon

"Field"

lowa State University, Ames, Iowa

Field is a 92 foot long artwork on the glass guardrail at Harl Commons, a meeting place for the School of Agriculture at lowa State University. The imagery is inspired by the breathtaking horizontality of an lowa field, serving as an emblem for agriculture as cultivated land and a reference to the University's history as a land grant institution. More symbolically, a field refers to an area of study and links to thoughts on agricultural leadership as stemming from the personal, intense and committed relationship you have with your field, how you can change your "field" and how it can in turn change you.

Through a pattern of vertical lines, the image is divided onto two layers of glass, which creates a gap that allows the layers to interact with one another and shift in relation to the movement and position of the viewer.

Artist: **Corinne Ulmann** Client: Iowa Art in State Buildings Program for Curtiss Hall and Art on Campus Collection

"Halo"

Collège Bourget de Rigaud, Quebec, Canada

Halo has an ethereal presence and is a metaphor for an elusive reality. It is visually mysterious, changing with the light and the viewer's perspective, at times almost disappearing. As an object in space it reflects, refracts and projects light, colour and image. The viewer interacts simply by coming close and seeing bits of reflection and the disjointed reflections of the surroundings. The panels turn with a touch of a hand fragmenting the world around. Halo is a meditation on the nature of physical reality as revealed through light, challenging our perceptions.

Visitors can step inside and become a part of the work, manipulating it. Halo exists beyond its physical boundaries.

Eight panels, 10' wide, stand vertically in a 6' 7" diameter circle. Each glass panel is 7' 11" tall. They turn to create a variety of configurations.

The dichroic micro-layer is sandwiched between two 1/4" mm thick tempered laminated plates of glass. These panels are held in place by stainless brackets at the top and bottom. Dichroic glass is glass containing multiple micro-layers of metal oxides that give the glass dichroic optical properties. The main characteristic of dichroic glass is that it has a transmitted colour and a completely different reflected colour, as certain wavelengths of light either pass through or are reflected. This causes an array of colour to be displayed. The colours shift depending on the angle of view.

Artist: Catherine Widgery

"Network of Knowledge"

Fraunhofer Institute of Laser Technology (ILT) + Production Technology (IPT) – Aachen.

The architectural concept has prescribed a white opaque glass façade for the ILT, and black for the IPT. When the competition went out to tender the sizes for the glass panes had already been determined.

The Idea

Two large network drawings have been integrated into the two glass facades (facing towards the new RWTH-campus and along the axis of the site development), that serve as a landmark which is visible from far away. The drawings are animated by light and thus provide a vivid and continuously changing picture – akin to a pulsating organism. These scenes of light receive their impulses directly from the Institutes themselves and the light-system is linked to the Institutes' Intranet - allowing internal activities to be visible in an abstract format.

The glass has been treated to make the drawings visible, even in bright daylight, and there are a multitude of very interesting pictures - continuously changing, depending on the weather and the ambient light. In the sunshine, projections of the network are produced in the surrounding areas by the additional reflective lines in the white glass of the ILT.

The drawings bear one signature, but they vary for each individual house; each in accordance with the specific Institute. The artistic concept focuses the two themes of "Light" and "Network" - which are of equal importance to both Institutes. Their diverse levels of significance coupled with their high degree of abstraction will never put them in danger of becoming outmoded.

The concepts of both Institutes depict that, as a principal work structure, the network has great significance within the team. The depiction of the network on the façade is therefore - similar to a neural network - an abstraction of the inner structure.

Light is not only the original subject of Fraunhofer, but is also a core subject for ILT and IPT - very obvious in the case of the Institute of Laser Technologies, but also in the IPT, where lasers are used to manufacture optical components like lenses, for instance. The shape of the network lines in the ILT is derived from the straight course of the laser beam, and in the IPT from the rotating movements of grinding and polishing processes.

Artist: Annette Sauermann Client: Fraunhofer Society

2 network drawings in opaque glass panes depending on the ambient light -visible through sand blasting and reflective lines or through a background illuminated LED-light-system (controlled by the impulses provided by the Institutes' Intranet).

Dimensions:

Colour of light –ILT: Red Colour of light – IPT: White/green/blue, slowly alternating

Black façade ILP: Height -5.46m / Width – 23.76m White façade ILT: Height -3.72m / Width – 15.04m

"Gläsernes Schatzkästchen" (The Glass Treasure Box)

for nano-structures, Technology Park in Halle/Saale, Germany

The estate accommodated a hospital and care home for almost a century. The buildings were constructed in this park-like landscape between 1842 and 1847 and became "The Royal (Prussian) Provincial Mental Hospital". In 1935, the State Mental Hospital was closed, and the premises were assigned to the newly-developed Army and Air Force Intelligence Academy. A park was then created in the generous grounds. After the unification of Germany, military use ceased and the estate was taken over by the Halle Centre of Science and Innovation, with the new-building of the Bio-Nano-Centre having just been opened in the same location.

The Bio-Nano-Centre - as the new central institution of the Centre of Technology and Foundations further reinforces the City of Halle's reputation as a centre of excellence for micro and nano analytics; this applies especially to the field of material development and structuring. The design of the Bio-Nano-Centre is totally sympathetic to the listed building of the former State Mental Hospital. Building work, proportions, colour and material have been incorporated and new buildings have been erected on the foundations of demolished building complexes.

At first glance this is a clearly-defined and compact building structure, though its complexity is only revealed through its detail. A windowless wing of rooms forms the heart - the Black Box- of the building. This is enhanced by a frameless artistic casing designed by Professors, Göbel and Triebsch from Halle. A delicate pattern is reminiscent of nano structures; using over-imposed large diagonals. Next to the "Gläserne Schatzkästchen" is the three-storey laboratory and administration wing, and the two combined create a partly-roofed interior courtyard which is open to the public. The façades of these premises are made of light Spanish lime-stone, and their bands of windows are offset.

Artist: Prof. Christine Triebsch, Prof. Göbel

"Crystal Light"

Transfer Station Salt Lake City, Utah

Crystal Light is a response to the dramatic weather of Salt Lake City. It uses water in its different states as the metaphor for the temperature changes and precipitation. The salt crystals of the lake and the spectacular lightening storms over the lake are woven through these images as well.

Crystal Light is a complete environmental experience that surrounds the visitors to the Transfer Station and is never quite the same because it responds to the shifting lights and colours of the day light and at night is bathed in the programmed lighting that changes both intensity and colour as if in response to the movement of the pedestrians and actually in response to the movement of the elevator. The work exists within the planes and surfaces of the station as it dematerializes the surfaces and projects and reflects these crystal and water patterns beyond the physical boundaries of the work itself onto other surfaces. The colours of the lighting program will subtly change throughout the seasons, cooling as the weather warms and warming as the cold arrives.

Artist: **Catherine Widgery** Client: Salt Lake City Transportation

"Coom Barooom"

Beach 44th Street Subway Station Rockaway, Queens, New York

My designs were inspired by the flora and fauna of the region. My aim was to provide light and vibrant colour to an otherwise dark location, to give viewers with a long commute a moment of joy and brightness on their way to and from their homes.

I placed some elements near the bottom, so that they would be at eye level for children as they walked by the main portion or up the staircases to either side of the designs on the south facing side. Through the negative spaces in the design, viewers can see the community to the north, and on the south side, the Atlantic Ocean.

The title is based on a fragment of William Carlos Williams' prose poem, Spring and All. The passage has many lyrical lines, one of which alludes to the sound of waves crashing, 'coom barooom'.

Artist: **Jill Parisi** Client: MTA Arts for Transit

"The Beaches of New York City"

Beach 60th Street Subway Station, Rockaway Line, New York

Artist: **Simon Levenson** Client: MTA Arts for Transit Artist Simon Levenson paints figures at the beach in various poses in this work, which has the benefit of strong light that comes from the nearby beach being depicted. Levenson creates his figures serially, so they may be read in sequence as one reads a story. The southbound side of the station faces the ocean and has the brightest light and contains two large panels with larger than life-size figures filling the space amid the cool blue of the ocean. On the northbound side, the glass block contains a sequence of smaller vignettes that extend from sand to the sea in one long band. The view of the sequence depends upon the transit riders' path going up to or down from the elevated platform. The artwork was created in a glass block which is located in the mezzanine area which is above the street and below the platform. The fabrication technique echoed Levenson's brushwork, with hand painting of the individual half-blocks, which were then laminated to clear blocks. The resulting work is durable and allows light to come though. In the evening the illuminated interiors will light the work so it can be seen by those approaching the station.

The figures –many are children with their mothers- are seen in free and unguarded moments of delight that often comes as the sand meets the surf. Levenson has long painted such beach scenes and speaks of his childhood memories at the beach: "where life's greatest and smallest dramas play out on a daily basis."

"On and Off the Boardwalk"

Beach 67 Street Subway Station, Rockaway Line, New York

Ingo Fast's series of 17 laminated glass panels for the Beach 67th Street station at Arverne in the Rockaways, Queens, is partially installed, with artwork on the southbound platform; the rest of the work is installed on the northbound platform. Fast creates amusing figures and landscapes, rendered in thin lines, washed in color, and seen from unusual vantage points.

For this project he created a series of drawings that feature scenes from the neighborhood: families going to the beach, a roller coaster ride from the days of Rockaway Playland, which was located nearby, fireworks, and lazy summer days. As counterpoint, a pair of panels shows an ice skater enjoying the deserted beach community, still bright and vibrant under a winter sky.

Artist: **Ingo Fast** Client: MTA Arts for Transit

Croton Harmon Station

MTA Metro-North Railroad Hudson Line, New York

Eight art glass windows form a series of local landscapes in the waiting room overpass of a train station along New York's Hudson River. The glass windows are painted to create a sequence of trees passing through the seasons. Each window is paired with the window directly across, so that the room is sequenced into bands of seasons that are crossed to access the platforms.

For each window, hand-painted and airbrushed enamels are applied to three layers of glass that are then laminated, creating a dynamic image that shifts depending on point of view. When seen frontally, the layers collapse upon one another to form the image; when seen obliquely, the layers pull apart to create a moving pattern within the glass.

Artist: **Corinne Ulmann** Client: MTA Arts for Transit

"Mother Hale's Garden"

Mother Clara Hale Bus Depot, New York

Graced with exuberant brush strokes and a vibrant collage, Mother Hale's Garden created by Shinique Smith is inspired by the loving and generous nature of Mother Clara Hale who, for more than 50 years, cared for children - orphaned, sick and from broken homes - and helped transform their lives. Totaling approximately 6,672 square feet, the monumental artwork is composed of mosaic located on the façade and laminated glass in windows of the new Mother Clara Hale Bus Depot building located on Lenox Avenue between 146th and 147th Street in Central Harlem. A child's drawing of a bus stop found near Hale House influenced her deeply and became the source of inspiration for the artwork.

Smith works in a variety of artistic media, her work is known for the vast vocabulary of collected objects that alternate with fluid calligraphic lines and movement, suggestive of qualities that resonate on a personal and social scale. The original work of Mother Hale's Garden is composed of ten large-scale panels of colorful painted collage and centers on a spiritual motif of mother and child-like figures embracing in an abstracted garden. In May 2012, Smith worked with first grade students at PS 242, Young Diplomats Magnet Academy, to draw flowers and incorporated the drawings into the art glass for the north and south windows of the Bus Depot building.

In keeping with the new Mother Clara Bus Depot status as a certified green building, Mother Hale's Garden was created by weaving discarded materials into a vibrant garden. The result is a monumental work as the artist's tribute to Mother Clara Hale as well as to the people in the community.

Artist: **Shinique Smith** Client: MTA Arts for Transit

"Blue Tree"

CSU transit stop, San Bernadino, California

The Blue Tree project engaged the removal of a tree from the CSU San Bernardino campus. The loss of this pine tree was deemed necessary to develop a new station on the line of the more efficient sbX Rapid Transit system. We worked for 8 weeks with art students to document the tree removal process. Photographs of the tree are printed into glass windshield panels - an archive of the process of a tree being cut, pruned, painted blue and photographed for public art. The images of the tree blend into the sky on a clear blue day. On overcast or smoggy days, the same blue images of the tree will come to the visual forefront as the panel and white background frame them. As the sun passes through the glass, images of the tree are cast onto the ground symbolizing the loss of the tree.

Artist:Freya Bardell and Brian Howe (Greenmeme)
working with the Department of Art at CSUSBClient:Omnitrans sbX Rapid Transit

"Blueprint of Flight"

Dallas Love Field Airport, Fort Worth, Texas

Dallas Lovefield Airport 82' 1/4" wide x 13' 1 1/2" high hand painted ceramic enamel on tempered glass

The central figure in the artwork is that of Moss Lee Love the pioneering aviator from whom Love Field takes it's name. To the left of the design a collage of images that are taken from indigenous plant and bird life; the Pecan Tree and the Mockingbird are overlaid with a flock of birds in flight. To the far right we can see a historic map of Downtown Dallas from about the time of the first runway construction at Love Field. To the left of the map is a large globe showing modern day flight paths around the world with Dallas as a central location. On top of all these elements are many layers of poems that relate to mans "desire to fly". Some of the text is totally legible and sharp to read while other layers of text are seen as soft dream-like "vapour trails" across the sky uniting and connecting everything.

Artist: **Martin Donlin** Client: Dallas/Fort Worth International Airport Architect: Corgan Architects, 2013

"Metamorphosis"

Terminal 1, Raleigh Durham International Airport, North Carolina

The artwork is bold and vibrant at first viewing but contains many references to local plants, seeds, crops and vegetation, the idea of growth was developed to suggest a nurturing environment in the Raleigh, Durham and Chapel Hill area. The Feature Wall at Terminal 1 creates a large artwork in glass that allows translucency, transparency and also opaque areas where appropriate but to be seen as one entity.

The artwork is painted on all four surfaces entirely by hand and is toughened and laminated with a small amount of cast toughened glass bonded to the front surface. At the security level the name of every city in North Carolina is etched into the glass surface. The colours are a "family" of warm earthy tones, as a symbol of welcome with a contrasting series of "Tar Hill Blue" figures at one side.

Hand painted ceramic enamel on tempered laminated glass.

Artist: **Martin Donlin** Client: Raleigh Durham Airport Architects: Clark Nexsen

"Ripples"

Site 3, Terminal 1 at Raleigh Durham International Airport, North Carolina

Airports can be stressful places. Ripples creates a contemplative, soothing expanse of blue water where the patterns of drops remind us of eternal rhythms and cycles. We see the sky reflected and the texture of the water with the waves of the drops expanding. For those who look more closely, the drops are falling and the rings on the water appear to be expanding; the whole surface of the water alive with the delicate motion of rain falling on water.

In order to accomplish this I approached Rufus Butler Seder who has worked for 20 years developing a patented system to animate images in a flat surface without mechanical means. For this project we have created an entirely new approach and if it is built this will be the only thing like it in the world.

The impression of movement is achieved via thin etched lines that "interfere" with an image behind them. This image is actually three images that are woven together on the computer into thin strips and as you move by the etched lines obscure part of the image so that the brain sees for a fleeting instant only one...then the next and then the third and then the first one again. What the brain perceives is interpreted as motion. I took photographs of "rain" on water that we created on a day right after a rain storm when the sun had come out and the sky was blue with clouds. I took the photographs in rapid sequence so you are really seeing three moments in time in a single hybrid image that is viewed sequentially due to the movement of the viewer.

Artist: **Catherine Widgery** Client: Raleigh Durham Airport Architects: Clark Nexsen

"Water Series"

Ronald T.Y. Moon Judiciary Complex, Kapolei, Hawaii

Sense of Place for the new Judiciary Complex: Within the Hawai'ian culture, Kanawai is the word used for justice and law. The root word, "Wai" is water . Water rights, useage and how it flows from mountains to sea was so vital to sustain life. The calm healing water images of Anianiku (integrated in 5 window bays) are reflected from a protected coastline cove in the ahupua'a of Hono'uili'uli (Kapolei).

Artist: Doug Young

Client: Hawaii State Foundation on Culture and the Arts Architect: Architects Hawaii

Doug Young, Artist

"All commissioned work is a collaboration: the artist has a general vision, the glass art fabricator offers the ways and means to interpret it. We went through many techniques and samples throughout the year and the Peters Studio, the staff and the studio family were always open, patient and enthusiastic on trying directions and combinations of technique never tried before. In the end, the final product exceeded both our visions."

"Cloudbreak"

Denver Justice Center, Colorado

In this work, light is a metaphor for insight and clarity in justice as it is throughout the Justice Center. As potential jurists sit and wait for their selection and instruction, the sun from the outside glows from behind the clouds as if from a higher plane of awareness. The shifting colour and light as it plays over and through the glass is a meditation on transcendent beauty and it calls on each individual to reach for his or her higher self while taking on the serious responsibility as a juror.

The original plaster wall has been replaced by a wall of approx. 11,200 glass tubes so that some of the translucency of the window on the left is continued through this wall. Behind the wall of glass tubes the etched glass frit "skin" of the building allows the morning light from the east to illuminate the wall. The side of the tube wall which is toward the outside glazing is covered with a permanent coloured film.

Artist: **Catherine Widgery** Client: City of Denver Department of Cultural Affairs

"It was a pleasure to work with Peters Studios on this project. Their attention to detail, superior craftsmanship, and collaborativation turned this project into my careers masterpiece."

Catherine Widgery

"Tidal Song"

Trump Bridge, New Rochelle, New York

Mouth blown stained glass and etched float glass, sensors, speakers, programmable LED lighting, 120 x 12 x 14'.

In this work pulses of light and colour sweep across the bridge and curl up to the new Plaza. Tidal Song links New Rochelle's traditional connection to coastal waters with dynamic energies of 'now'. Nature's forms are woven in a language of technology.

From the outside, a simple, bold gesture of light and colour constantly evolves into something new. Inside, it is an immersive experience. The visitors 'play the instrument' of this space. A visitor entering the bridge triggers waves of light, colour and sound. Each person creates his own song and light show with almost unlimited possibilities. Hidden motion sensors in the ceiling set off unexpected sounds and shifting light patterns at different points from side to side and along the length of the bridge. From below, footbridge pedestrians are seen triggering light movement within the bridge. Energy flows as the light and sound ripple through the luminous volume.

During the day, direct and indirect light makes the stained glass luminous, projecting the blues and greens across the floor. The visitor stands within waves of muted ripples of light. From the street, the sky backlights the brilliant layers of colour.

At night, the whole volume of the bridge becomes a light box with a coloured glass skin. The glass is etched in such a way as to offer rich effects at an intimate scale while the etching catches the light both day and night. The etched designs on each 6" square pixel are inspired by fractals where even the smallest part reflects the structure of the whole. The antique glass has water-like internal textures that cast beautiful shadows.

JMC Partners were the art consultants on the joint venture between Capelli Enterprises and the Town of New Rochelle.

Artist: Catherine Widgery

"Oak wisdom"

Druid Hill Park, Baltimore, Maryland

The Baltimore City Department of Recreation and Parks commissioned a new entry artwork as part of efforts to revitalize historic Druid Hill Park. Artist William Cochran designed an arcing 70-foot colonnade for the new park entrance near a 19th-century glass conservatory.

Six pairs of salvaged iron columns with bronze frameworks hold luminous entablatures with paintings and imagery in five layers of glass that display residents' memories of the park. Thousands of fracture lines and an engraved diffusion layer capture and hold the light, illuminating the intense colours in the glass. The work is visible from all directions and its appearance changes - sometimes quiet, sometimes fiery - depending on orientation and time of day. An energy-efficient, low-maintenance LED system is concealed within each entablature, transforming the sculpture into a crescent of torches after dark. Durable, low maintenance materials, techniques and natural weather-induced patinization contribute to sustainability.

Research revealed that Druid Hill Park was named for giant oaks that once shaded it, since legend holds that Druids worshiped in sacred oak groves. The artwork's title Oak Wisdom is a literal translation of "Druid". The artist has said the work is "an abstraction of a young oak grove, a kind of reliquary for memories of the park and a standing prayer for re-seeing and rethinking our relationship to the natural world."

Artist: William Cochran

"Spirit of the Rockies"

United States Post Office Building, Denver, Colorado

Airbrush and hand painted ceramic enamelled glass. Toughened and laminated to withstand a 9' 10" high snowfall. The canopy design has an undulating sculptural form inspired by the Rocky Mountains. Blue skies and the Lark Bunting bird have influenced a number of the images for the canopy with colours taken from the Rocky Mountain Columbine plant. These images are juxtaposed with thin white lines that trace the Rocky Mountains and refer to the path taken by visitors to the main entrance, the colours project onto the pavement during the long hours of sunshine.

Artist: **Martin Donlin** Client: Denver Public Art Program

"The Quad"

Glass Façade, Derby, United Kingdom

Using the external glazing of the upper glass area of the building. Illuminated by LED strip lighting.

Techniques:

Toughened glass with enamel paint of two surfaces of the double glazed units.

Dimensions:

85 panels of varying dimensions - largest 4' 7" width x 5' 3" height. Overall dimensions - 55' 2" width x 20' height. Area - 1100 square feet.

Artist: Alexander Beleschenko

Portland Tram Tower Lighting

The Gibbs Street Pedestrian Bridge, Portland

Artist Statement

The Tram tower will be lit to reflect seasonal changes in the Portland sky and environment and will generally respond to lunar and solstice cycles. The subtle colour shifts will connect to the hues of the water images in the Gibbs Street Pedestrian Bridge elevator. Dichroic glass filters will be changed every month, on the first working day of each month.

Colour sequence

In January the cool Mediterranean blue light will be followed in February by Pale amber light which will crescendo into the Warm amber light of the March, Spring Equinox. In many cultures this time coincides with the beginning of the year (Passover, Easter, the beginning of the Indian calendar). Blue green follows in April (a complementary colour to mark the change), the Green in May when Portland gardens are verdant succeeded by the Primary blue of June, when the deep blue of the sky at twilight seems to last the longest and seems the most prominent. This is followed by the contrast in hue and complementary colour of Pale amber in July, the usual beginning of the summer in Portland. In August bright Sky blue leads to the Amber of the September Harvest Moon. October sees the building of intensity of the blues with Mediterranean Blue followed by the darker Blue green in November and the intense Primary Blue in the winter solstice month of December.

Equinox & Solstice rhythms

The warmest amber tone is prominent in the Spring and Fall Equinox (Literal translation 'Equal night') months, March and September. In the months of the Solstices, in June the sun reaches its highest position in the sky and is the longest day of the year and December the longest night of the year and the beginning of the return of light. In my monthly calendar the richest blue will mark this in the sequence.

This sequence of colour brings the Portland Tram to even more prominence as it changes with the season. The lighting of River Wrap, the glass of the elevator tower, will slowly shift from warm white to cool white, each will bring out the different colours in the glass, and acting as a subtle, dissolving shift in light that will be complemented by the colour of the Tram Tower.

Artist: **Anna Valentina Murch** Client: Portland Tram

"Waikui : The meeting of two waters"

Hawai'i State Museum Sculpture Garden, Honolulu, Hawaii

Retaining as sense of Hawai'i's first olympic size pool, Waikui is comprised of two overlaying water images:

The bottom is the historic pool and subtle swimming lanes, the transparent top is an ocean water image symbolizing the meeting of two waters. O'ahu is known for being the "meeting place", Waikui is an old nameplace on the Big Island where a once sandalwood forest stream flowed into the ocean.

Overall size: 16' x 35' - 144 art glass blocks

Artist: **Doug Young** Client: Hawaii State Foundation on Culture and the Arts Architect: Group 70 International, Inc.

"This was my second project with Peters Glasmalerei and we went through many trials and tribulations of technique, colour, and again pulled through with a product beyond our expectations and again, a first among exterior public art glass commissions."

Doug Young, Artist

The reconstruction of "The Josef Albers' Windows"

Grassimuseum Leipzig, Germany

For some time now the Grassimuseum in Leipzig has been proudly presenting a unique piece of modern art; the stairwell windows designed by Josef Albers, an artist of the Bauhaus style; and it is thanks to many generous donations that it has been possible to reconstruct these exquisite windows.

Now when you enter the spacious foyer of the museum, you will be able to experience a new dimension in space. The strictly geometric and square composition of Josef Albers' stairwell windows - designed in 1926 in the "Thermometer Style" - measure up to seven metres in height and appear to create a connecting band between the individual levels of the building. They provide the effect of a large and segmented, yet Interlinked and radiant picture, which is revealed properly only by movement. The windows were first created as a contribution to the significant "European Arts and Crafts 1927 Exhibition" in the Grassi Museum. It had been, however, always proposed to keep them in situ as a permanent feature of the building.

Placing these windows in such a central position - they are in fact the largest piece of glass design from the Dessau Bauhaus Period - was a commitment by the museum to the artistic avant-garde. However, the museum was destroyed by World War II bombing raids and the "Albers-Windows" were, for a very long time, deemed to be lost. Public charity campaigns made it possible to have some historic pictures digitally developed to precision standard, and using these, Mrs Christine Triebsch, Professor of Glass Painting at Castle Giebichenstein, the Halle/Saale Academy of Art, was appointed to be in charge of the artistic reconstruction of the windows.

The technical execution:

Following the review of all available resources, it was decided to use various opalescent and opaque double panes of flashed-glass, which were specially crafted for this project by "Glasshütte Lamberts" in Waldsassen. Some of the lower segments of the windows were made of translucent glass. Various light and dark layers of Schwarzlot (black stain) were applied to the inside and, in places, to the outside of the glass as well. All the edge cuttings were done by hand, in the traditional way, and were then polished. The glass panes were leaded with lead profiles of various strengths, and then putty was applied. The outside of the glass panes did not receive a protective layer, so that the intended aesthetic appearance was not impaired.

Artist: Christine Triebsch

Client: Grassimuseum of Applied Art

"Meisterhäuser Dessau"

Bauhaus Ensemble Dessau, Germany

The "Meisterhäuser Bauhaus Ensemble" created by the Architect and Bauhaus-Director, Walter Gropius, was built in Dessau at the Ebertalle from 1925 to 1926. In 1945 the Director's House and House No. 2 were destroyed by aircraft bombing raids.

"Bruno-Fioretti-Maguez", a firm of architects, was asked to assist in the reconstruction of the buildings. They did not wish to create a building that competed with the original, but rather a building which picked up the historic structures and reflected them as neutral, grey structures. This concept was to be continued on the windows.

Options of refinement-techniques were subsequently developed at "Glasmalerei Peters" in order to achieve this effect. Numerous techniques were tested, presented and developed in several workshop meetings. Together with "Thiele Glas" of Wermsdorf, Glasmalerei Peters developed a procedure of transmitting the chosen combination of these effects onto the large areas of glazing. "Thiele Glas" then supplied these glass panes, and provided the workshops and machinery as well as their "knowhow" in order to implement the work. "Gipser Glass Building Enterprises" dealt with the technical installation aspects and further developed the architects' frame-module in order to guarantee perfectly-fitted glass installations. They manufactured the frames and assembled the complete glazing work.

The architects created a design that played skillfully with blurring, to avoid imitating the original, yet still trying to evoke a deliberate blurred memory of the original building itself. The windows are made of insulated glass, with an all-round projection to the apparently "frameless" assembly in the "Structural Glazing Principle".

The glass panes were cut to measure, and the edges were cut and polished. In addition, the lower edges were milled to support the panes to prevent them slipping within the frame construction. Each window consists of a thermally deformed outside and an inner pane, both with décor painting; these were subsequently coated with low-e using a fixed dimension process. Following extensive cleaning, the outside panes; consisting of 12mm thick clear glass, were thermally moved inside the furnace. The glass panes were softened at 700°C, and this created ripple movements and heat blisters in the glass itself. The movement created the blurring on the glass pane and gave the glass its physical appearance. Following another extensive cleaning process, the glass pane was coated with a ceramic paint on both sides, using a brush. The coating was kept moist, and was evenly distributed with badger hair brushes. During this process, the tilting table was again gradually lowered, creating the slightly floating, semi-transparent effect.

A light grey mixture was applied to the outside; this contained a greater content of white; while the inside was coated with a darker grey mixture containing a greater content of black. This combination of 12mm and 10mm panes and the deformation and coatings of paint in varying shades give these panes their physical appearance. The polished edge picks up the grey of the concrete and seems to mould the glass pane into concrete itself.

The blurred scenery of the outside surroundings - when looking out from the inside - plays a vital role in the overall concept. The surrounding seems to be surreal, somewhat akin to shadows or movement, and this keeps the viewer's focus on the inside of the room.

"Wellbeing"

MediCo Centre, Paderborn, Germany

The new MediCo Centre were looking for an artwork to adorn their new facility. The initial brief was to produce an artwork at the main entrance, however once I met with the architects we began to explore other areas. Finally once a glazing system was agreed we went for the corner of the two main streets that the building fronts.

The artwork was to inform to local people that this was a new facility in the City and generate a feeling of confidence for the visitor – "if the building looks this good – the treatment I receive should also be great!"

The designs have been created using simple human figure forms in the pursuit of health and happiness. The figures include men, women and children as a "family" just like the building houses a "family" of professional practitioners who we as the public can trust to look after all our healthcare issues with confidence. The designs have been generated with the spirit and sense of well-being then abstracted to such a degree as to extract the essence and nature of this feeling, hopefully leaving the viewer to project their own thoughts and interpretations onto the artworks.

The colours are designed to be warm and welcoming, not to alienate anyone but to be accessible and inviting. Finally I was invited to extended the design philosophy into the building where parts of the main design artwork were used as signage and way finding.

15 x 16 Metres - The glass is Hand painted, toughened, laminated and secured to the building with invisible fixings.

Artist: Martin Donlin Architects: Bremer

"Hippocrates"

University Hospital, San Antonio, Texas

Hand painted enameled glass, 30 feet high x 15 feet wide, 18 glass panels 35 inches diameter, 14 panels 14 inches diameter

The design is constructed as a series of "cell's". The shapes and forms take on many meanings and allow the viewer to project their thoughts and interpretations onto the piece. I have chosen a "family" of colours that are intended to be warm and welcoming with occasional complementary colours for accent.

At close quarters the designs appear abstract and contain many textures and treatments, however, from a distance the viewer can notice an image emerging. In the centre of the design is the face of Hippocrates the founder of modern medicine. Below are a series of small discs containing herb and leaf forms representing historical healing properties. The small discs wrap themselves around the larger forms as a reference to Aesculapius with the serpent entwined around a staff.

The small discs act as "pictograms" the images convey a message from Hippocrates: "Wherever the art of medicine is loved, there is also a love of humanity."

The information plaques also contain the image of Hippocrates, the shape of the plaque is the same as the "Rosetta Stone", the key to understanding modern language.

Artist: Martin Donlin

"Floating Bubbles and Whimsical Rays"

38th Street Lobby of NYU Langone's Ambulatory Care Center, New York

For New York based artist "Daru" Jung Hyang Kim a new public art commission for NYU Langone Medical Center (NYU Langone) illuminate the healing connections between nature and culture. Her latest contemporary masterpiece, "Floating Bubbles and Whimsical Rays," is a 12-by 20-foot glass artwork that was recently unveiled in the new 38th Street lobby of NYU Langone's Ambulatory Care Center.

"By using vibrant patterned colors and floral forms, I tried to create optical rays and floating bubbles to give a feeling of happiness and whimsy," said Daru, whose works have been featured in numerous publications and widely exhibited in the U.S. and Korea. "By presenting both nature and culture, I want to create a sense of what is seen and what is imagined, thus creating harmony and eternity."

The lobby glass piece consists of four panels of laminated glass that were fabricated by Germany's Glasmalerei Peters Studio. Each panel has two pieces that were fused together after digital printing and airbrushing. Mirror and jewels were attached to the glass surface to reflect the surrounding environment and give additional depth to the piece, which was installed on a metal wall frame with backlit LED lights by a team of 20 workers.

In recent years, art has become increasingly important to many healthcare environments, added Jodi Moise, curator of the NYU Langone Medical Center Art Collection. "Studies have shown that such programs improve patients' overall health outcomes, treatment compliance and quality of life.

"Art also helps create a positive environment for caregivers, reducing stress and improving overall workplace satisfaction," said Moise. "The collections at Langone Medical Center foster a welcoming, healing environment that supports our mission to treat the whole patient by addressing emotional as well as physical needs."

Artist: "Daru" Jung Hyang Kim

"The Healing Window"

Rhondda Hospital, Llwynypia, Wales, United Kingdom

Three windows each 8 metres high x 3 metres wide. Antique handmade mouth blown glass acid etched and painted, bonded to toughened safety glass.

The three windows are based on individual themes: the healing process, the Rhondda Valley and River and finally the local community.

I visited the old Rhondda Hospital to consult with both patients and staff regarding the design process. Leaf and plant forms are used as a reference to historical healing properties together with small multi coloured capsule and tablet images to represent man made medicine. A serpent inspired shape is evocative of the Rhondda River and acts as a metaphor for Aesculapius, with a serpent entwined around a staff as his attribute.

Finally the third window includes thousands of tiny human figure forms to represent the community. All the figures are from drawings made by myself and the community in Rhondda.

Artist: **Martin Donlin** Architects: Nightingale Associates

"In the shadow of..."

Chapel in the new hospital Nordlandssykehuset HF, Vesterålen, Norway

The landscapes of Vesterålen have a strong presence in Tollefsens work. The minutely observed and interpreted landscape appears repeatedly in his oeuvre. The sense of seeing "the great in the small and the small in the great" gives an entry into the reading of his photography.

In his large scale work on glass, Tollefsen is concerned with the sense of a landscape, the appreciation of weather and the feeling of light. Scaling up the small details of a landscape that is so familiar to him into a large format creates potential for new interpretations. Further layers are created through the translation of these details and motifs onto glass, using printing techniques combined with traditional craft skills such as sandblasting and hand enamelling.

Tollefsen has produced two large scale works so far with Glasmalerei Peters in Paderborn. The first is installed in the St. Konrad Pfarrkirche in Falkensee near Berlin, where Tollefsen won a competition to complete a new glass wall in the renovated church. The second project is the glass recently installed in the new hospital chapel in the North of Norway.

In the later work, Tollefsen has developed a technique with Peters which combines digital print photography with enamelling, sandblasting and etching. In this project they have worked with three layers of glass to create extra depth and dimensionality. The enamel colour, applied with airbrush, adds further intensity to the colours. Sandblasting and etching applied to details strengthens the highlights in the motifs, and is particularly effective as the light through the glass changes.

The motifs in the design include small details of branches, straw and heather, photographed backlit, with minimal depth. These are again enlarged several thousand percent. The blurred areas and reflections suggest new landscapes and abstractions. These abstract landscapes are perfectly served by the new combined techniques.

Artist: **Espen Tollefsen** Client: Hospital Stokmarknes

"Credo"

"The Dominikus Centre" in Munich, Germany

The 42'8" x 15'5" CREDO-window has been installed in the clearstory of the chapel and is the only natural source of light for this room. The clue lies in the title - this is an artistic implementation of the Christian statement of faith.

The window in the Chapel of the "Dominikus Centre" consists of a total of six levels of glass and lettering which are positioned on two panes of glass - with the outer pane serving as insulation. The inner pane has a coat of light-grey and partly-translucent colour, which reacts strongly to light. For the lettering on the inside of the outer pane, the glass was partially covered, and a highly-reflective metal was applied through a special vacuum-based sputtering procedure. The result is a silvering of the lettering on both sides. The large lettering is dark grey and is on the periphery of the frame - it was stenciled using a special coating technique.

Artist: Andreas Horlitz

Client: Catholic Church Foundation St. Gertrud, Munich Architect: Prof. Andreas Meck, meck architekten, Munich

Werktagskapelle - (The every-day Chapel)

St. Mary's Church in Borgholzhausen, Germany

Hundreds of squares have been combined to create a blue band which extends horizontally across the whole area: The inside Cross appears to be positioned in the centre of an abstract composition, which expands symmetrically on both sides, allowing a very diverse effect to unfold in the process. Constructed in 2013, this wall in the Church of St. Marien and St. Nicolaus in Borgholzhausen towers to a height of 11' 2" and stretches in excess of 33' in length. It is a monumental piece of art made of structured and polished glass, which acts as a divide between the actual church and the every day chapel, while at the same time creating a link between the two.

The artistic design was made by Thierry Boissel. His work is a piece of art that is focused on elementary structure, and which gives the room a diverse and surprising effect - which also creates a very special atmosphere. Distinctive and orderly, and with its varying zones of reflected light, the wall almost comes to life.

In appearance it is vividly mobile and rich in abstract and cryptic connotation. It is a creation that is open on all sides, yet it is strangely connective in an opaque and also translucent and sometimes transparent way. This seems to alter, depending on the situation and the angle of vision. In conjunction with the light, which is an ever-changing phenomenon, the wall presents a multitude of new impressions and views. It looks different when seen through the variety of views and angles and, in so doing it challenges the visitor's perception while inviting very personal interpretations at the same time. XXXXXX

Artist: **Thierry Boissel** Architect: Hans-Joachim Kruse

"Hope Cloud"

LIG Insurance Light Tunnel, Saechon, South Korea

Entry tunnel to LIG HD Center in Sacheon, Korea, integrated LIG's logo which symbolizes "Hope Cloud" with surrounding environment. The logo has 3 colours of blue, green and orange. By mixing the logo's principal colours with the changing presence of nature-inspired images and decorative designs, I have created an image full of hopefulness and sense of harmony.

Artist: **"Daru" Jung Hyang Kim** Client: LIG Insurance Architect: Gansam Architects & Partners.

"It was such a pleasure working with Peters Studios. Not only have they executed my concept beautifully, but they worked with my budget without compromising my artistic vision. They were extremely accomodating with my tight deadlines. I would work with them again for my next project."

"Daru", Jung Hyang Kim, Artist

"Wind Through Four Points"

Four Points Office Building, West Palm Beach, Florida

The artwork's title Wind Through Four Points plays off of the points of a compass. The installation is thematically centered on the gesture of opening the front door. Metaphorically, the wind rushes through the building; spreading through the lobby and all "four points" of its interior. The colourfull first floor lobby with its 10 colours represent the sub-tropical visual flavor of South Florida: the constant cerulean blue sky, turquoise waters, bamboo leaf green, yellow and orange sun tones and sand. As juxtaposition, the second floor's stark black and white represents an abstracted "street traffic" image. In addition, three art glass windows burst with colour, light and movement. Fused glass pieces on the lobby's side walls reference paper and other solid objects that have "blown" into the space.

Artist: **Gary L. Moore** Client: Palm Beach County Art in Public Places Architect: Saltz Michelson Architects

"Peters Studios allowed for the creation of a large scale public artwork in an intimate studio environment. The excellent collaboration between artist and in-house designers and craft workers provides an additional level of artistic expertise for project support."

Gary L Moore, Artist

"Torris"

Belle Pre Bottle Company, Alexandria, Virginia

Torris was installed at the end of 2013 at the old Belle Pre Bottle Company, a glass factory in Alexandria, VA, which began operating in 1902. Filling an entire city block, the complex was transformed into an residential complex by Equity Residential, who commissioned the work. The sculpture is seen from all angles, including windows up to the seventh story level on all sides of the plaza.

Torris uses salvaged train rails from the site with dichroic glass fins to animate a plaza with brilliant reflected colour and light that change according to viewpoint, weather and the sun's position. The work is illuminated at night with a special lighting system. The Latin word torris means firebrands, reeds, or burning arrows..

Artist: **Wiliam Cochran** Architect: Parker Rodriguez

"Two Roads"

Georgia Avenue, Silver Spring, Maryland

"Two Roads" pays tribute to pioneering environmentalist Rachel Carson, who altered our perceptions of nature. A open air glass room materializes and dissolves within an urban meadow. Indigenous plantings and paving weave in and out of a light steel structure holding semi-mirrored glass panels with engraved text passages, standing like the pages of an unfinished book. Some bays are open and frame the landscape surrounding and growing into the plaza.

The engraved text is drawn from Carson's writings on the environment. Two powerful pasages are highlighted in overlapping dichroic glass letters that float within the primary panels, where they appear and vanish as the viewer moves through the space, sometimes breaking the light into its spectral components.

The room of transparent mirrors reflects the viewer, the trees and surrounding buildings, rearranging them as the perspective of the viewer and the light changes. In this fluid overlapping of natural and architectural elements in the glass, the viewer's image is the only constant, reflecting Carson's call to personal responsibility for the environment.

The studio collaborated closely with the landscape architecture firm Oculus on the design of this artwork. Oculus also designed the urban meadow that surrounds the work. Two Roads was commissioned by Home Properties, Inc for the new residential building Eleven55 Ripley, designed by Shalom Baranes and located just off Georgia Avenue in Silver Spring.

Artist: Wiliam Cochran

Montgelas Park, Munich-Bogenhausen, Germany

Art and architecture have a lot in common; they unite the values and the aesthetics of their time and retain them for coming generations. Now, the "DNA" installation by Andreas Horlitz in the foyer of the Montgelas Park combines both.

Artist: Andreas Horlitz

"Trigger Picasso Energy"

Hawai'i State Museum Sculpture Garden, Honolulu, Hawaii

Trigger Picasso Energy is a freestanding sculptural canopy made of stainedglass, gold and silver leaf, aluminum and solar photovoltaic cells. The glass is 48' x 8', in eight sections. The sun projects vibrant dappled patterns beneath that change throughout the day.

Inspiration:

The State Fish of Hawai'i is a "trigger" fish - the Humu' humu' apu a'a' - I thought what better Trigger fish for the Art Museum than the "Picasso Trigger"? Trigger is also a verb that means putting something in motion, the title is a play on words... Let's get creative in our thinking about alternative energy!

Artist: Carol Bennett

Client: Hawai'i State Foundation on Culture and the Arts Architect: Group 70 International, Inc.

"It's a beautiful dance, I lead, Peter's follows... then Peter's leads and I follow. It is indeed a collaboration."

Carol Bennett, Artist

"Science of Light"

Grass Valley Elementary School, Camas, Portland, Oregon

What are the lessons we will give our children, and how will we communicate them? Surely the best lessons are those that help prepare them for the world they will grow up in and for the decisions they will make in their lives. This simple but powerful idea inspires "The Science of Light," a new solar art glass installation at Grass Valley Elementary School in Camas near Portland, Oregon.

This unique installation in the main stairwell windows of the school merges the ancient art of stained glass with cutting edge technology to produce a window that not only looks magnificent, but works for its living as well by gathering and using electricity in a visible and interactive way - as solar energy is gathered a glass spiral located in the stairwell is illuminated. A secondary grid of dichroic glass offers everchanging colours.

Embedded in two panels are arrays of photovoltaic cells. In this way the windows harvest energy from sunlight. The colours are warm and welcoming: the windows present solar energy to the students, staff and visitors in a joyful way.

The artwork is designed to delight, to teach, and to inspire. The delight will come from the transformation of sunlight into patterns and colours throughout the stairwell - and visible energy. The inspiration and the teaching will be accomplished through the innovative use of the solar panels built into the windows - affering an ongoing lesson in science, ecology, and the positive uses of technology.

Artist: Sarah Hall

Client: Grass Valley Elementary School

"I find Peters Studios one of the best equipped art glass studios in Europe. Every technique that I have needed is possible, or soon made possible, so that the design vision can be realized - an artist's dream!"

Sarah Hall, Artist

The Enwave Theatre before renovation

"Water glass"

Enwave Theatre, Toronto, Ontario, Canada

The Enwave Theatre was originally constructed in 1926 as an ice house where large blocks of ice intended for freight were stored. It was converted to a theatre in the 1980s. As part of the recent renovation the theatre now boasts a sleek, three-story glass envelope that surrounds the entire north, east, and west sides of the facility with Sarah's "Waterglass" painting inspired by the shifting pattern of light on water. On the east façade, an image suggestive of a lake freighter holds 360 silk screened photos related to the history of Lake Ontario. The glass provides thermal insulation and has unique, electricity-generating windows.

"Waterglass" is a world first for integrating art glass and photovoltaics with heat mirror technology, bringing it to the highest insulation values possible for glass. Not a bad upgrade for an 88-year-old ice house!

Artist: **Sarah Hall** Client: Enwave Theatre, Harbourfront Centre

"Solar Ilumination I: The Evolution of Language"

Pearl Avenue Branch Library, San Jose, California

With the opening of the Pearl Avenue Branch Library in San Jose, California, in August 2008, the City became the first municipality in the United States to install a permanent public art that combines photovoltaic (PV) cells and art glass in an architectural application.

Artist Lynn Goodpasture collaborated with Peters Glass Studios, Portland, Oregon, and Paderborn, Germany, in the creation of four art glass windows, each 98" x 35", embedded with PV cells that in turn power a suspended glass LED-illuminated lamp. The artwork's imagery explores the evolution of alphabets as the foundation of the written word. Each window contains characters in scripts that are the basis for written Latin, Russian, Vietnamese and numerous Indian languages. "We are all one" is engraved repeatedly in cuneiform on the lamp. As this installation explores cultural differences in the windows, the colour-changing lamp bridges those distinctions by celebrating what we share.

Goodpasture conceived "Solar Illumination I: Evolution of Language" to link the past with the future by exploring the first writings of humankind. The same time the art incorporates the newest applications of solar and LED technologies.

Artist: **Lynn Goodpasture** Client: City of San Jose Public Art Program

Photos: AK Photography

"Lux Gloria"

Cathedral of the Holy Family, Saskatoon, Canada

Beauty, technology, and faith are combined in a unique solarglass installation in the spire of a new cathedral. "Lux Gloria" (Light of Glory) is a landmark installation of three monumental, southfacing windows that grace the upper façade. The stained glass in the spire shades the interior of the worship space (and organ loft) from strong south light - an essential element of the building's design. In contrast to traditional stained glass, the solar windows are highly visible to the exterior and form a seamless integration with the white cladding.

This project is a world first- a cathedral whose stained glass windows generate energy from sunlight, and provide a visible demonstration of stewardship. The design for "Lux Gloria" was inspired by the transcendent glory of God as seen in the beauty of creation and the vast prairie skies. Within the silver-hued array are 12 dichroic crosses, signifying the apostles.

There is also a circle, representing a prayer for unity. The largest window is 37 feet high by 12 feet wide and sits 107 feet above the ground. Each window is divided into 18 panels - 54 panels in total - with each panel being a unique size, shape and design. With more than 1,000 hand-soldered, silver-coloured solar cells embedded in the windows. This installation is expected to produce about 2,500 kilowatt hours annually. The solar array is grid-connected and the installation is Saskatchewan's first building-integrated photovoltaic system (BIPV- solar panels embedded into windows or walls). The cathedral will receive a rebate on its energy costs from the utility grid.

Artist: Sarah Hall, RCA

"Lux Nova"

Regent College, Wind tower, Vancouver, British Columbia, Canada

"Lux Nova" is a solar-embedded art glass sculpture that rises up through a forty-foot wind tower at Regent College in Vancouver, Canada. The tower serves as a natural ventilation system for the new underground Theology Library.

At the heart of the glass design is a luminous column of light, flowing like a waterfall in silvery blue, violet and white. Included in this column is an array of solar cells that collect energy during the day and use it for nighttime illumination – acting as a beacon for the surrounding park. Arranged within the design are twelve dichroic glass crosses, creating an ever-changing rainbow of colour. The technological innovation in Lux Nova blends seamlessly with the ever-changing beauty of wind, light and colour. Architect Clive Grout and Sarah Hall won an American Institute of Architects "Sacred Landscape" Award for this pioneering collaboration.

Artist: Sarah Hall

Client: Regent College Architect: Clive Grout & Walter Francl Architects

"The friendly, well-trained artisans bring skill, focus, energy and imagination to their work, making our collaborations an exciting voyage of discovery and artistic success. While working on projects in the USA, it is a real delight to have the experience, wisdom and insight of their wonderful US representative, Peter Kaufmann."

Sarah Hall, Artist

"Leaves of Light"

A Golden Section Solar Installation Life Sciences Building, York University, Toronto

The entryway of the new Life Sciences Building at York University in Toronto is now graced with a solar art glass installation inspired by the golden section and the remarkable Gingko tree.

"Leaves of Light" is designed to collect solar energy during the day and then use it to illwninate the entryway at night. The embedded blue-grey solar cells are a perfect match for the innovative sculptural facade (based on DNA molecules) designed by SSG Architecture.

Artist Sarah Hall created this piece in three distinct layers: a solar cell layer that collects energy from the sun, LED light sheets powered by the solar cells, and a painted layer with golden imagery and layers of text.

The artwork includes Goethe's poem Gingko Biloba in the original German and seven other languages. The composition is unified by the classical proportions of the golden section. The Gingko Biloba is the world's oldest living tree, whose existence can be traced back over 250 million years. Its fossils are studied in climate change research, since it survived a time of sudden greenhouse warming fifty-five million years ago. Through poetry, technology, and images of leaves and trees, this installation offers a unique demonstration of solar energy collection while celebrating the beauty and mystery of our natural world.

Artist: **Sarah Hall** Client: York University

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