

Light Art.

From the luminous object to the luminous atmosphere; light Influences in architectural lighting.

Recognize where we come from is crucial to decide where we are going to. This is valid for all but especially for the future of artificial lighting. Architectural lighting today is the result of research by Light Art artists throughout the twentieth century. But I want to say, as an architect, it is necessary to ensure to avoid that this process runs delegitimized from the architecture itself because of the frivolity and the ignorance about the essential role of light in the space configuration.

Artificial light begins to be present in the works of art from the time of its inception, although it is with the universalization of electricity, in the early twentieth century, when they begin to consider its expressive potential.

1. The precursors of Light Art

The electric light makes artists overco-

me the two dimensions of the "canvas", makes them to introduce the movement and energy, to experiment with light and shadow, it gets to start a new trend in art, in which artificial light is the main element of the work.

Light integration on nineteenth art is immediate. Composers such as Alexander Scriabin and Thomas Wilfred explore the relationship between light

and music, built instruments like the Clavilux and the color organ that combines music and light effects, coming to create new artistic disciplines as Lum.

Painters, set designers, photographers and architects incorporate artificial light exploring its possibilities and building mobile installations and objects as the light and shadow modulator by László Moholy Nagy.

From the 1930s artists as Zdenek Pesanek, Gyula Kosice and Nicolas Schöffer made sculptures combining light fountains, water and gas with motorized mobile structures and colored glass. They develop the dynamic art and create new movements such as light-Madi art and light-dynamism.

In the 1950s the Zero Group, formed by Heinz Mack, Otto Piene, and Günther Uecker, developed the kinetic art and the optical art with full ownership of artificial light. In the words of Mack 'Light is decisive for my art ... Light has its own energy and quality. The light in a space and articulates a message.'

I want to emphasize the role of 'meaning' and 'message' of light associated with the space. The use of materials such as aluminum, steel and plastics in

their work is associated with the effects light produces on them as reflections, transparencies, shadows, rhythms and contrasts, etc.

Some examples are works as Lichtballette (Light Ballet) and Rauchbilder (images of smoke), by Otto Piene, in which it became clear the relationship between energy and the work. They all fall close to the concepts of kinetic art, but still do not address the spatial dimension of the work, which will be a feature of the artists of Light Art.

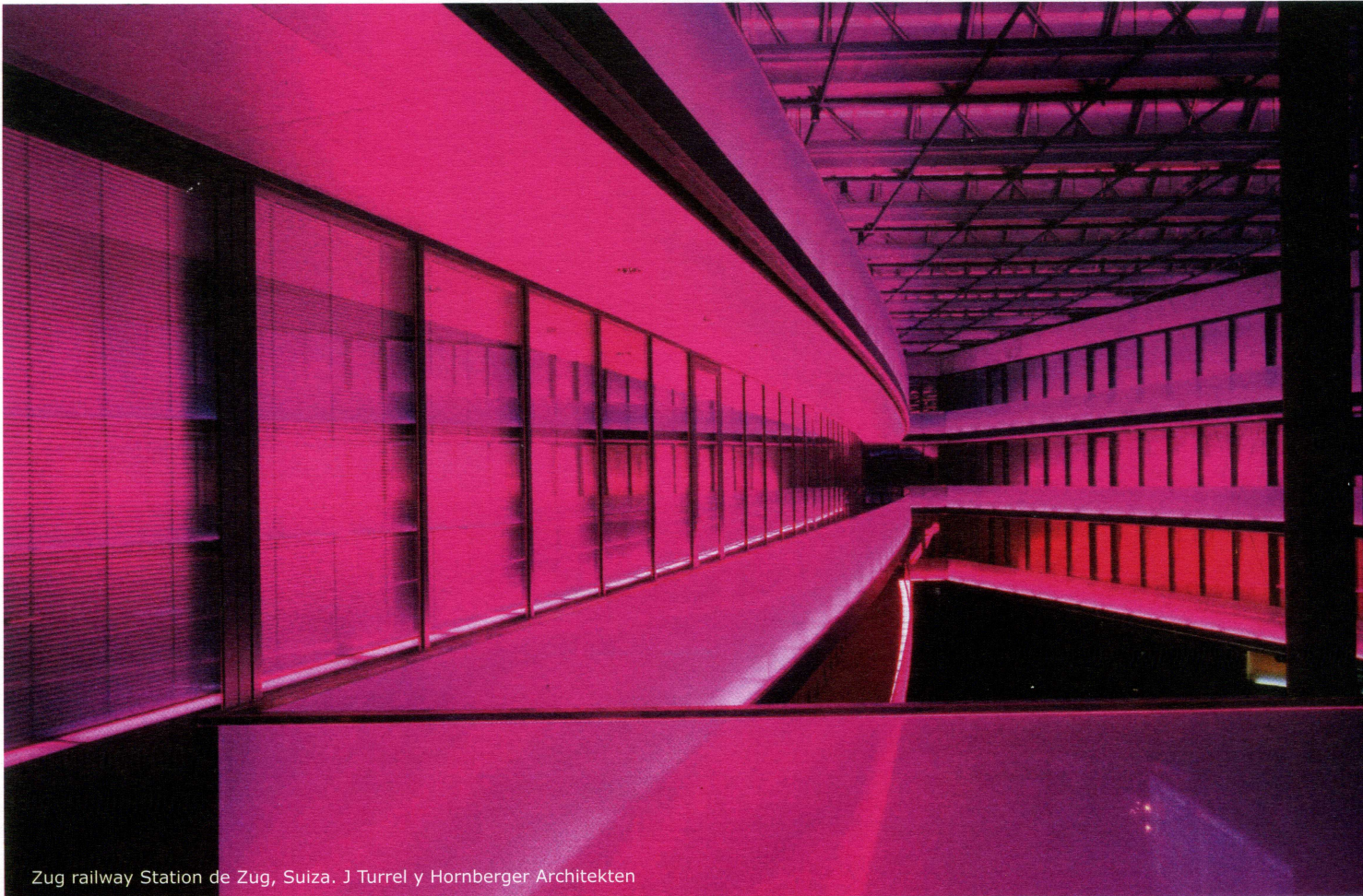
It is in the 60s when the observer becomes a key element for the reality of the work, which deals with visual perception, the psychological emotions, the spatial understanding, etc. The space will assume different roles, from a complete independence, up to be a

necessary element for the perception and realization of light.

The relationship between the works of Light Art and the architectural space, urban or landscape, has followed different trends and which together have created the grounds of the current sensitivity to artificial light and its undeniable influence on architectural lighting.

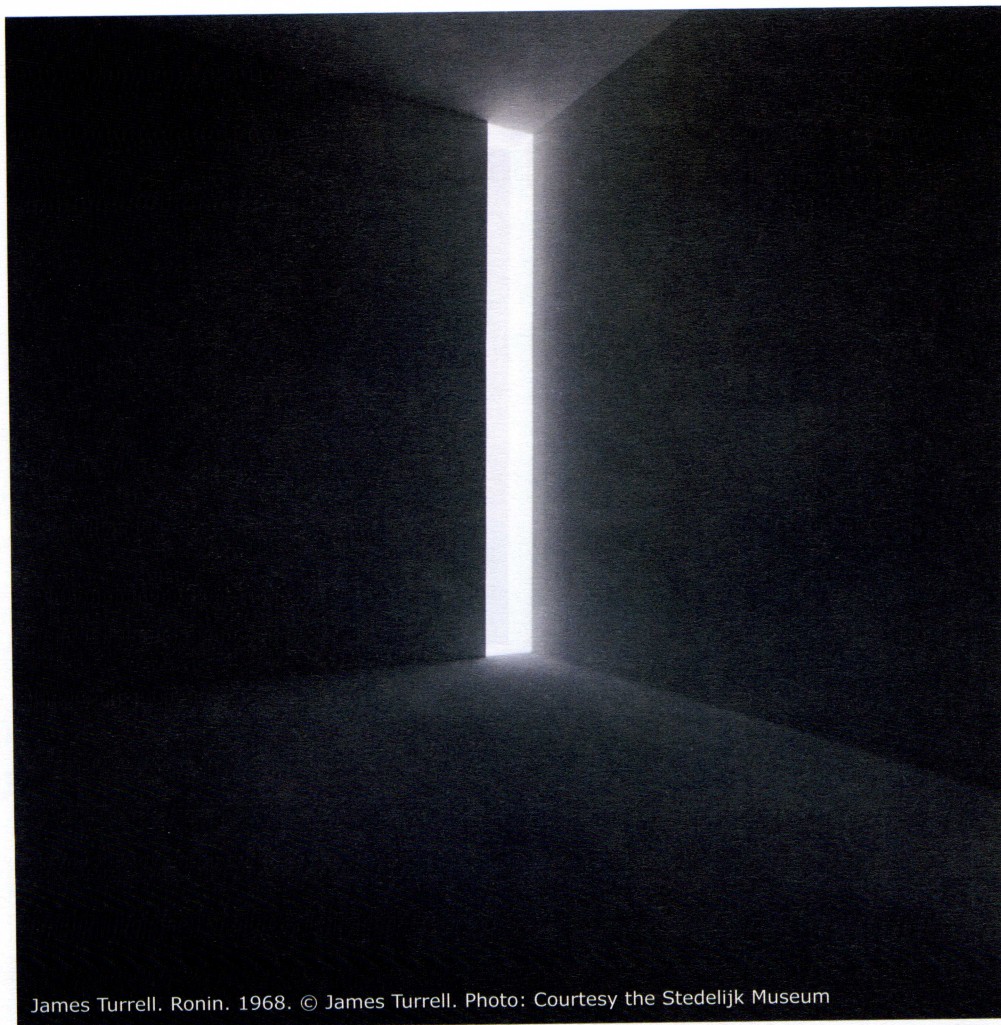
2. Light sculptures. Materialized light. Physical object, perceptual object.

One of the first experiences of the Light Art is the aesthetic use of light sources as incandescent lamps, neon tubes and fluorescent tubes. With them the artists will build extensive walls, sculptures and lighting objects, with the light pervading the space that contains them.



Zug railway Station de Zug, Suiza. J Turrel y Hornberger Architekten

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James Turrell. Ronin. 1968. © James Turrell. Photo: Courtesy the Stedelijk Museum

The works of Dan Flavin in the seventies, consisting of modular structures of fluorescent tubes, begin to relate with the space to maintain a role 'figure and container' without trying to change it.

Other types of objects are the ones constructed with light, they are geometric shapes or spaces which are perceived from a two-dimensional representation. They are the Afruns by James Turrell, made of light projections on different surfaces.

In this case the work is a purely cognitive exercise. The light is the means to realize a 'visual image' built mentally as three-dimensional. The space is not involved in the work. This is a visual comprehension exercise, a game of light and visual perspective.

The works also move to the urban space. Often, artists are based on natural elements, such as the proposed Tree of light, by Francesco Destefano, or explore the visual impact of an object defined by lines of light optical fiber, as in the work Canoe by Warren Langley. Sometimes the repetition of

the luminous object fills the space and transforms the work into a global intervention of landscape character as in the proposals of Christo and Chris Burden. Also the work approaches architecture as in the case of the artist Brigitte Kowanz.

In these proposals, the light is intrinsically linked to the physical object. It is retained therein lighting the space without trying more than the mere observation of the object.

However when the light needs the space to complete the vision of the work, and to materialize it we are not facing objects but projections.

3. Light Projections

That means that through spots of different luminance and geometric shape compose, on a visual perspective, a deep space and materialized. Unlike the Afruns by Turrell, the projections of O. Eliasson explore with its transparency, the virtual definition of a space bounded by solid and translucent planes simultaneously.

In the work Remagin of 2002, the light defines virtual planes that make up a three-dimensional space by the illusion of depth and perspective. The space acts as a stage, as a panel support or canvas which capture a virtual image. In these approaches, the light, the space and the observer are essential, without them it is possible to complete the work.

The projections in the urban space require water surfaces, the facades of the buildings or the pavements of the city as a material to be seen from the sky or clouds.

Artists such as Rafael Lozano Hemmer, Jeny Holzer and Jan Kersalé, construct messages and pictures overlaid to the architecture, or just chromatic varnish on its outer skin.

3. Psychological interaction. Perceptual light. Color and saturation

Once overcome the physical or perceptual object, the Light Art moves towards the emotional exploration of the subject. Experiment with the psychological interpretation, with the game between the qualities of the light and the sensory perception, whether to transform or to investigate the physiological sensation of space.

Green Light Corridor, or Yellow room triangular, by Bruce Neumann, are examples of that.

These experiences lose their strength when they move to an architectural space due to the weight of the architecture. Chromatic relationships are more complex by the presence of the materials themselves. Strengthening and chromatic nullification play a role in the perception of the work, which is perceived as an added facility, rather than a bet of light transformation of the ambient.

Works as: Neon-723 657, by Dan Flavin; Truism Y by Jeni Holzer, The Wedgeworks by Turrell; Room for one colour and 360 ° room for all colours, by O. Eliasson, are significant although the perceptual Cells or Ganzfeld Sphere by J. Turrell where the approaches are strictly sensory being the observer facing light without any physical reference of space.

The purpose of this works is not to change the perception of space, but to

"Once overcome the physical or perceptual object, the Light Art moves towards the emotional exploration of the subject".

change the subject psychological emotions. This, unfortunately, move literally to many architectural projects, without a previous critical reflection upon the relationship between light, colour and the architectural space.

Recently, the interaction with the observer is performed based on sensors and actuators on measurable parameters. An architectural antecedent is the project of Toyo Ito's *The Tower of the Winds*, in 1986. Often the parameters that command the relation with the work are easily measurable, such as heat, motion, noise, etc. It is a type of interaction based on quantity parameters. The evolution of these proposals should be directed towards psychological and emotional interaction. From *Colour-therapy*, as a healing technique, should be advanced into the *light-therapy*.

Some of these works are examples Volume of the artists United Visual Ar-

tist, at the Victoria and Albert Museum in London, and *Current 3* by Virginia Folkestad in collaboration with 186 Lighting Design Group, at St. Railroad Bridge in Denver.

4 Atmosphere creation. The atmospheric light. Density and space

In the last period of the Light Art we find that light and space are arranged to form an indissoluble whole, creating a density and an atmosphere in which the viewer enters, carried away by the senses, to worlds of intimate reflection.

In some cases the experience of light does not need any container space, which is not important, it is only necessary for the physical containment of light in an artificial environment.

Works like *Beauty*, *The weather project* or *Your atmospheric Color atlas* by O. Eliasson recreates the experience of the luminous atmosphere.

The exploration of natural phenomena

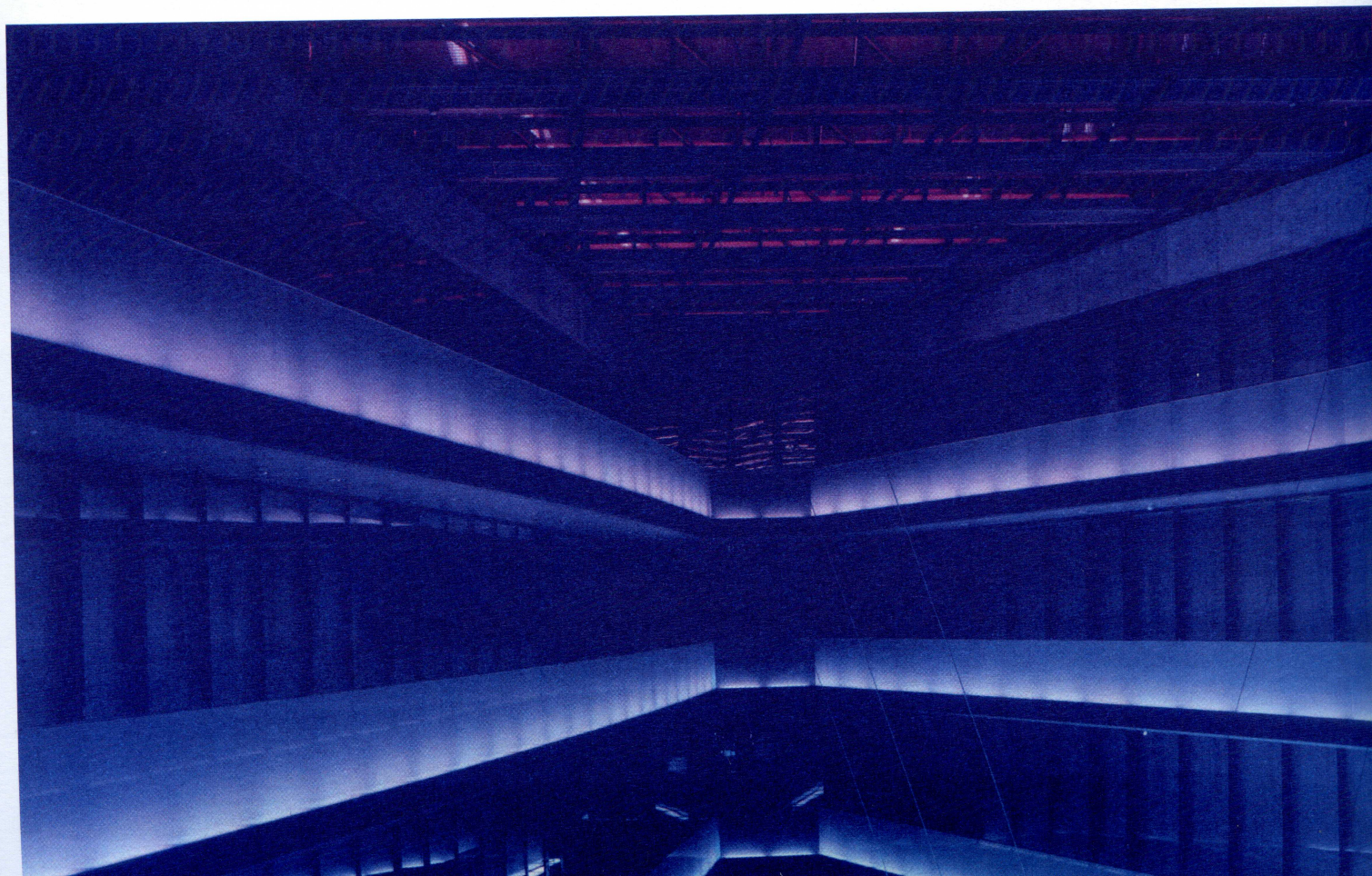
such as lightnings and the aurora borealis, and the creation of artificial light atmospheres in urban outdoor spaces, is one of the last proposals of the Light Art.

Works like *Yellow Fog* at the Jewish Museum, New York, of O. Eliasson, *The Lightning Field* by Walter di Maria are examples.

5. The influence in architectural lighting

Reached the present time we should remember the claims of pop artists of the sixties. The great attractive of the Light Art is that its exhibition space is outside the physical concepts of 'museum-gallery' and this allows the artist to access a wider and unspecialized audience.

The Light Art artists have found in the field of architecture, a proper space for expressing their ideas and express them interactively with the viewer.



trado en el campo de la arquitectura, un espacio propicio para expresar sus ideas y manifestarlas de forma interactiva con el observador.

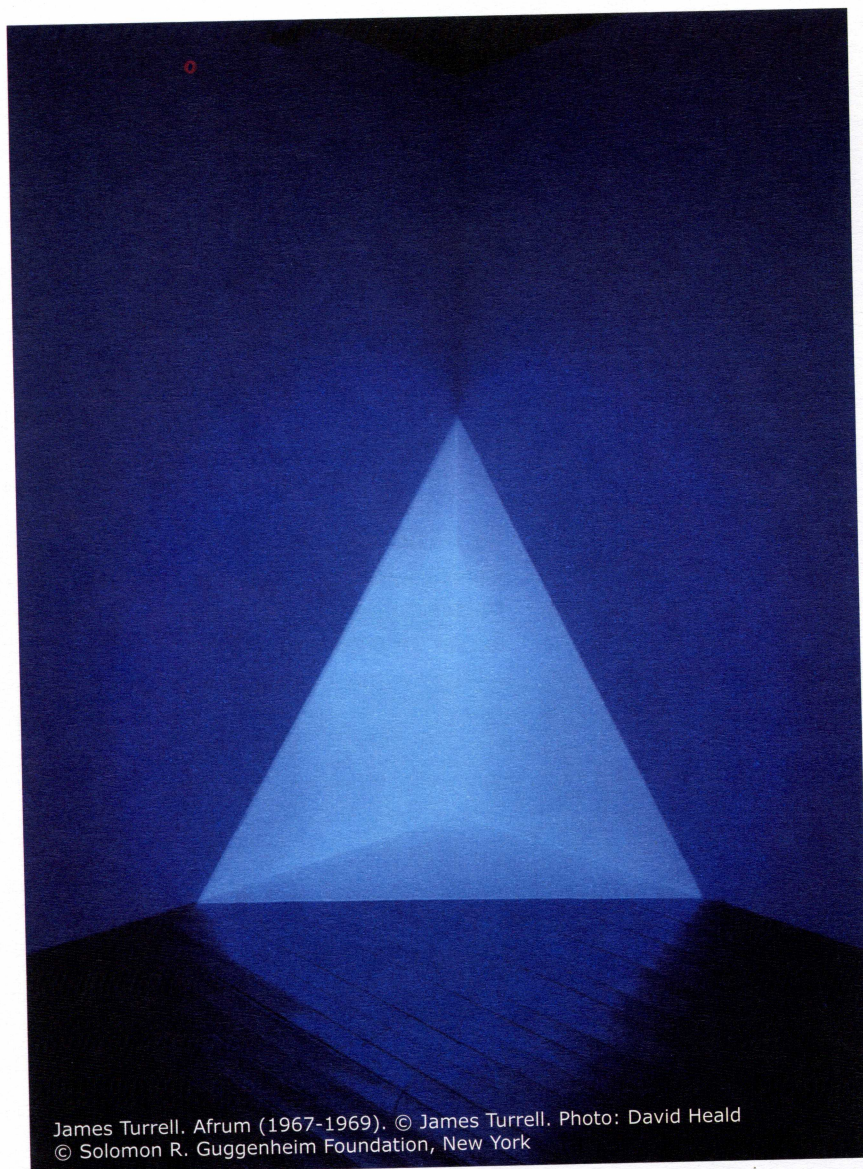
La arquitectura actual se ha convertido en su nuevo espacio de expresión artística y ha transformado la iluminación arquitectónica en una tendencia específica del Light Art.

Son innumerables los ejemplos de integración del Light Art en la arquitectura, colaboraciones entre artistas y

arquitectos han aportado nuevas conceptualizaciones a la iluminación arquitectónica. Algunos ejemplos son: *Zug railway Station* de Zug, Suiza, del artista J. Turrell y Hornberger Architekten; el *New Hotel Roff* en Londres del estudio multidisciplinar de Jason Bruges; el *New Ars Electronica Center* de Linz del artista Dan Wilcox y Treusch architecture, y *The Gallery Fashion Store* en Seul de Arup Lighting y UN Studio Arq.

Desde este punto de vista, el comien-

zo del siglo XXI representa un espacio de vértigo conceptual donde, más que nunca, hay que retomar el papel de la luz como lenguaje constitutivo de la arquitectura. Hay que evitar, a máximo, no caer en las propuestas frivolidad comercial, y no confundir la arquitectura con la información visual "mass media", y re-ubicar la disciplina del Light Art y de la iluminación arquitectónica en el lugar que corresponde. ■



James Turrell. Afrum (1967-1969). © James Turrell. Photo: David Heald
© Solomon R. Guggenheim Foundation, New York

The current architecture has become their new space of artistic expression and has transformed the architectural lighting in a specific tendency of the Light Art.

There are countless examples of integration of the Light Art in architecture, collaborations between artists and architects have provided new insights into architectural lighting. Examples include Zug railway Sta-

tion in Zug, Switzerland, by J. Turrell and Hornberger Architekten, the New Hotel Roff in London by the multidisciplinary studio of Jason Bruges, the New Ars Electronica Center in Linz by the artist Dan Wilcox and Treusch architecture, and The Gallery Fashion Store in Seoul by Arup Lighting and UN Studio Arq.

From this point of view, the beginning of the XXI century represents a

space of conceptual vertigo where more than ever, we must resume the role of light as the establishing language of the architecture. We must avoid falling into the commercially trivialized proposals, and not confusing the architecture with visual information 'mass media', re-locating the discipline of the Light Art and architectural lighting in proper place. ■

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