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# MGS Modern Green Structures & Architecture

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## Sustainable Living: Design of the Future

A Changing Scenario Where Conscious Planning Takes Precedence

## The Metallic Look

**The most common material options for metal cladding are galvanized steel, aluminium, stainless steel, zinc, copper, titanium, etc, each of which have their own strengths and weaknesses; the choice of material will be influenced by the desired aesthetics, climatic conditions, structural system, nature of adjacent materials, and the construction budget, writes Ar. Sumit Dhawan, Founder & Principal Architect, Cityspace'82 Architects**

**F**acades determine visual identity and expression of architecture; their design imparts character to the building and is a parameter for building performance. Building facades lie at the convergence of the outward and inward environment - forming an integral part of the building. They are the most difficult to design since the perception of iconic and technologically advanced facades is changing frequently. Besides technology, materials like metal, glass, concrete etc, used for the building skin are an integral yet singular aspect of the façade design.

It's often seen that whenever an architect is talking about metal in facade, it is always correlated with commercial or institutional architecture. A few examples that come to mind are The Guggenheim Museum Bilbao by Frank O Gehry done in titanium, Riverside Museum by Zaha Hadid, and maybe The Sage Gateshead in UK by Norman Foster. But no residence done in metal will come to our mind, and if proposed by an architect, the clients' apprehension will be, "I hope it won't look 'commercial'."





The fact is that a metal facade combines attributes of both appearance as well as superior performance unlike any other building system. Use of metal facades in residences is recommended due to the extremely beneficial properties of metal. Aesthetically speaking, metal offers a unique modern rhythmic aesthetic to complement any building. Easily bent and configured to the specific design, it can be used as a lightweight decorative element, or as a structural component in buildings.

Metal roofs and wall panels can be curved to create a unique and dynamic building appearance - amplifying its versatility. Not only can metal withstand harsh weather conditions, it can also address resource depletion due to its recyclability. Being an eco-friendly material, it minimizes energy use, promotes sustainability, and invites innovation and creativity in terms of design. The concept is fast catching up in India, but the changes go beyond skin-deep alterations or a facelift. Apart from aesthetics, a metal façade also offers better functions.

Metal cladding encompasses a plethora of different materials, each with its own unique strengths and weaknesses. The choice of material will be influenced by a number of project-specific factors, including the desired aesthetics, climatic conditions, chosen structural system, the nature of adjacent materials, and the construction budget. The most common material options for metal cladding are galvanized steel, aluminium, stainless steel, zinc, copper, titanium, etc.

“Metal facades, combined with the right dose of technology, can uplift the exterior of spaces and multiply their utility  
**Ar. Sumit Dhawan**





Designers are researching and experimenting with new and complex façade and fenestration technologies. Along with the materials that furnish the look and feel of a building, technologies applied to facades are also changing. Investing in technologies like BIM allows designers distil options down to a set of criteria that meet the aesthetic ambitions of the project and its tactical requirements, ensuring that these are met with optimized environmental parameters.

There has been a slow but very perceptible shift from the use of traditional masonry towards the use of compelling automation in façade and fenestration. These include motorized shades, switchable windows that modulate daylight and solar heat transmissions, and predictive controls for optimized performance. End-user comfort, satisfaction, and acceptance of automated façade systems are the various ways automation is incorporated in facades. These tools enable designers to explore the forms, real-time and derive key insights into the thermal, daylight and solar performance informing decisions pertaining to the building orientation, solar shading, glazing etc and also save cost. **MGSA**