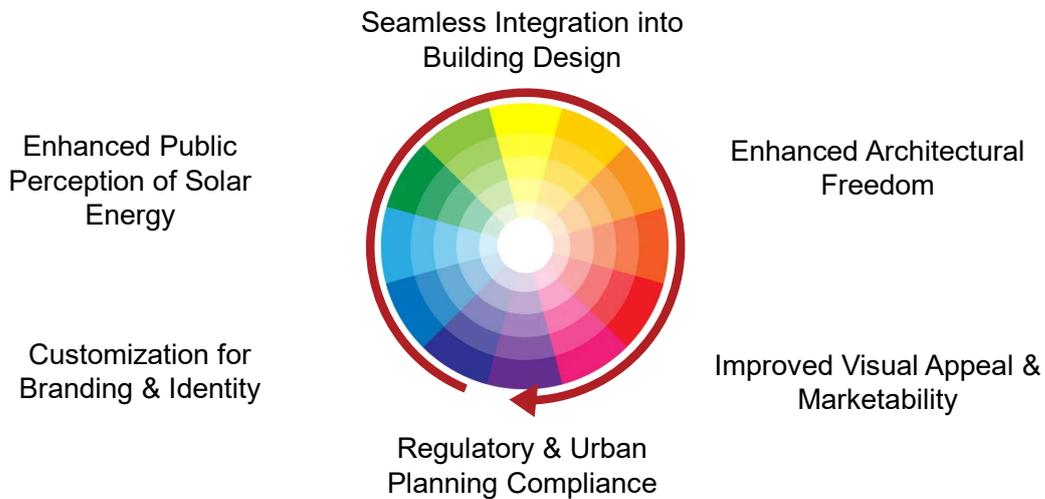




Why Do We Need to Talk About Colors?



How Is Color Integrated into a Solar Module?



Color at the **at the rear side of the frontglass** of the cover glass

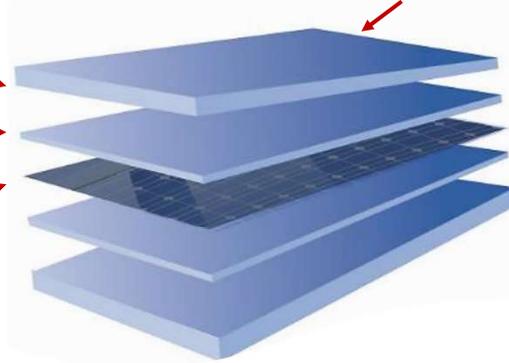
Foil



Colored cells

Reproducibility not given, not recommended

Color at the **front side** (under development)



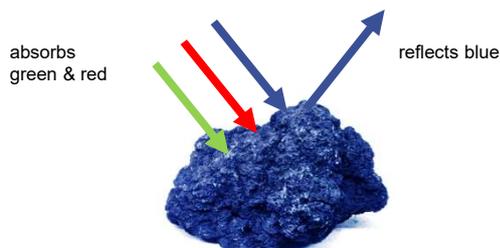
3

There Are Two Methods



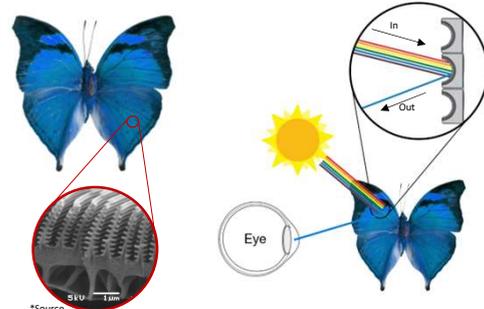
Method 1: Absorbing Colors

Pigments in plants and animals **absorb** certain wavelengths of light and reflect the remaining ones.



Method 2: Structural (Selective) Colors

Instead of using pigments, microstructures manipulate light through **interference**, diffraction, or scattering, creating vibrant, angle-dependent colors.



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Do You See the Difference? It's All About the Viewing Angle.



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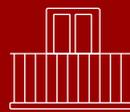
Some Examples



3S Solar Roof



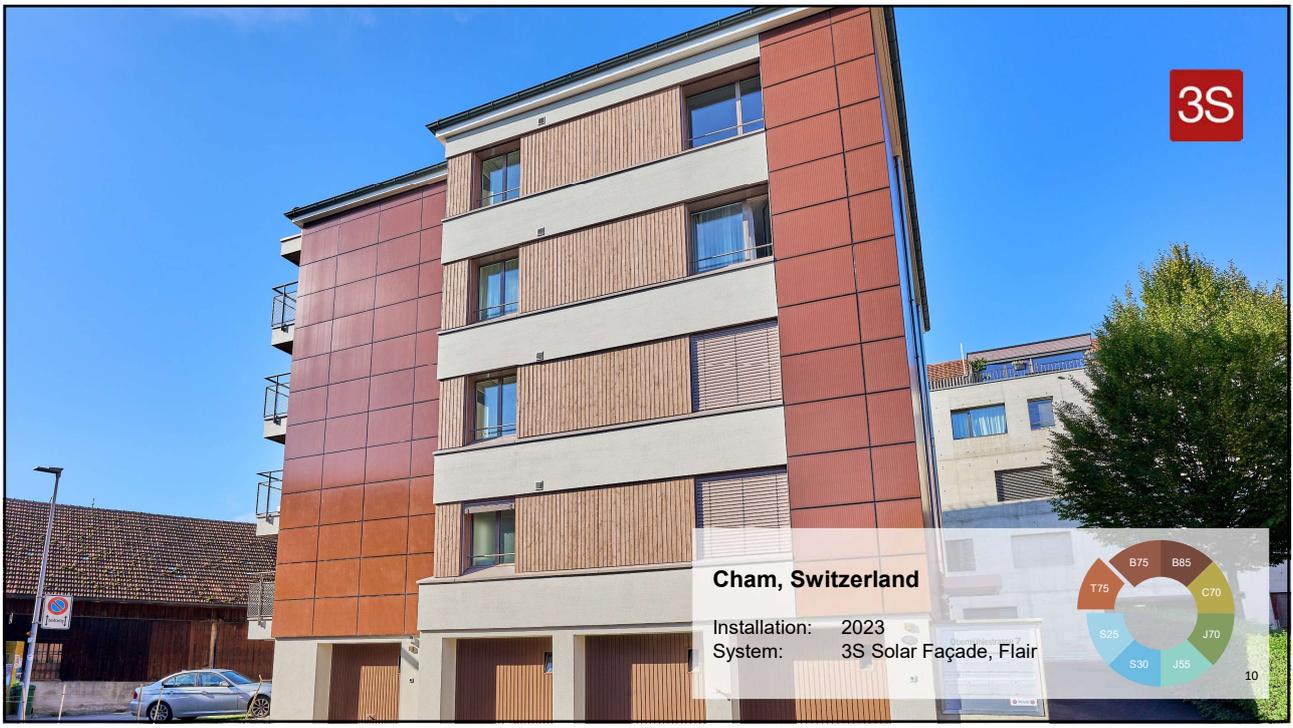
3S Solar Façade

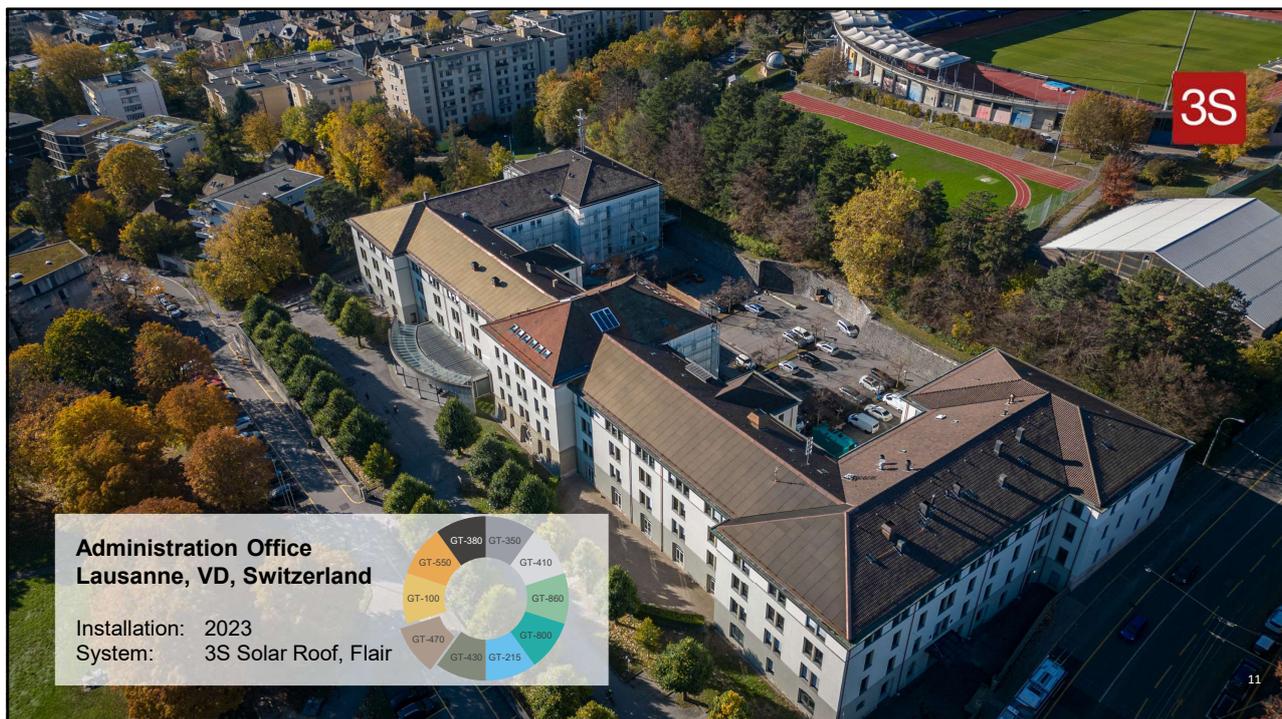


3S Solar Railing

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Frequently Asked Questions About Colored BIPV

Aesthetics & Uniformity: Does It Look Good?



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Yield & Efficiency: How Much Energy Is Generated?



Bernapark Pilot Façade (Bern, Switzerland)



Structural Selective colors

Absorbing colors

Relative yield calculated for the period from January 2023 to January 2024.

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Durability: How Long Does It Last?



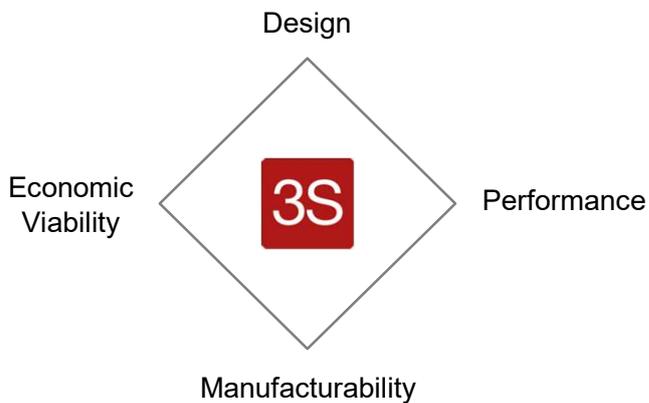
15

Manufacturability: Is The Cost Justified?



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Key Takeaways



At 3S, we evaluate the optimal balance between:

- **Design**
- **Performance**
- **Manufacturability**
- **Economic Viability**

to determine the most effective and feasible solution.

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3S Swiss Solar Solutions AG – The Swiss Solar Pioneer



- Thun and Worb | Switzerland
- Founded in 2001 by Patrick Hofer-Noser
- Swiss Made
- 120 Employees



Get in touch
 3S Swiss Solar Solutions AG
 Dr. Fabiana Lisco
 Project Manager of International Projects

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**Do You Have Any
Questions?**