

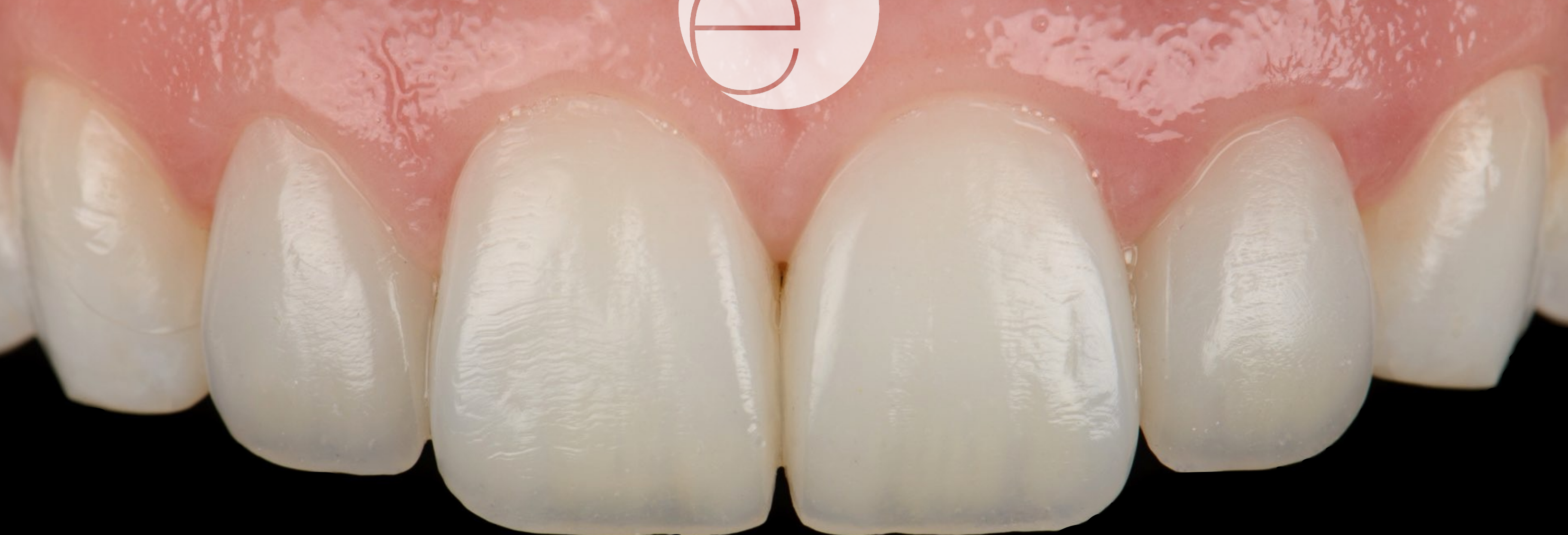


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Biomimetic dentistry in the anterior region

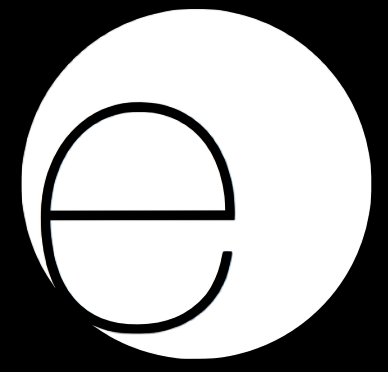
direct composite restorations

following Bio-Emulation concepts



GC

Bio-Emulation



The Bio-Emulation philosophy, as described in “structural analysis” and “visual synthesis,” has established new foundations for replicating natural structures with dental materials. The penta_laminar concept represents the highest expression of this philosophy: analyzing different stages of aging to create a dynamic color concept that adapts to nature. However, the application of this concept is challenged by its complexity, making it not easily accessible in all clinical conditions. By analyzing the most significant factors of tissue aging and applying this knowledge to material selection, it is possible to simplify the technique and make it applicable in any situation.

Achieving aesthetic restorations that resemble natural teeth represents a significant challenge for both dentists and dental technicians. Obtaining optimal results with the minimum number of trials or adjustments necessarily involves a systematic and thorough analysis of color. For this task, advanced photographic techniques are required, including different types of lighting and precise standardization of photographs.

Defining a solid strategy for composite color selection is of utmost importance in our daily work. The Bio-Emulation philosophy provides specific tools to dramatically enhance color-matching accuracy, including the personalized “custom_eyes” guides and the new eLAB protocol, which represents the pinnacle of precision in matching the color of natural teeth. This shifts from a traditionally subjective approach to one that is more objective and highly predictable.

*look deep into nature, and then you will
understand everything better*

Albert Einstein



layering direct composite resins

theoretical program



o *Bio-Emulation: A New Approach to Color in Dentistry:*

- Optical Properties of Dental Tissues.
- 3D Anatomy: Enamel vs. Dentin.
- Understanding the Aging Process of Dental Tissues.
- Color Selection Strategies: Custom_Eyes vs. Button Technique.
- Photography as a Tool for Color Analysis.
- The penta_laminar Concept: A Dynamic Layering Technique.
- Practical Implementation: Is Simplification Possible?
- Emulating Nature with a Limited Number of Shades: Selection Criteria.
- Simplified anatomy vs layering complexity.
- Clinical Application.





layering direct composite resins

Hands-on program



Class IV

Restorations of Anterior Teeth Using a Simplified Layering Technique



Veneer

Restoration of Anterior Tooth Using a Simplified Layering Technique



Diastema

Diastema closure and morphology change using One Shade Technique





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about the speaker

Javier Tapia Guadix was born in 1978 in Madrid, Spain. He graduated from the European University of Madrid with a dental degree in 2003 and served as an associate professor in the Prosthetics Department in 2004. In 2005, he began his career as a professional computer graphics artist, specialising in illustration, animation, and application development. That same year, he was honoured with the Collegiate Merit Award by the Spanish College of Dentists from the 1st Region.

In 2010, Javier co-founded the Bio-Emulation group with Panagiotis Bazos and Gianfranco Politano. This international group comprises experts in biomimetic dentistry, including clinicians, researchers, and technicians. He also works as a consultant and developer for various dental companies including GC and Polydentia and has been a member of the GC Europe Restorative Advisory Board since 2010. He is also key opinion leader for several companies including GC, Zeiss, EVE rotary, Polydentia, Velopex and LM instruments.

Javier is an official reviewer for the International Journal of Esthetic Dentistry, the Journal of Esthetic and Restorative Dentistry, and the International Journal of Periodontics & Restorative Dentistry. He works in private practice in Madrid and Barcelona, focusing on restorative dentistry and aesthetics. Additionally, he is an associate professor in the postgraduate aesthetics program at the European University of Madrid and collaborates with other universities across Europe.

As international lecturer, Javier has participated in over 400 congresses, hands-on courses, and live courses. He has published numerous articles on restorative dentistry, dental photography, and the use of computers in dentistry.

