

Layers

An Atlas of Composite Resin Stratification

Jordi Manauta • Anna Salat

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Paris, Beijing, Prague, São Paulo, Seoul, Warsaw

layers

la·yer ['lā-ər] *noun*. Each of the differentiated parts that, superimposed, form an entire entity.

*To my beloved family,
To my wonderful woman,
To my dearest friends,
To my little Xaviera,
To Miguel Tamés and Walter Devoto, my teachers,
To the loving memory of Carlos Alanís.*

Jordi

*Dedicated to the unending talent,
the tenacity and insatiable struggle,
to bright ideas,
to the “forever is now,”
under protests from the hereafter,
to passion,
in short, dedicated to you, Jordi.
Because the book was made possible thanks to you.
What seemed so complex has become simple.
At the end, it is about simplification,
because step by step,
LAYER BY LAYER,
we did it!*

Anna

Dr Jordi Manauta

Born in Mexico City, Jordi Manauta graduated with a degree in dentistry from the Technological University of Mexico (UNITEC) with major grants. He continued his postgraduate studies in operative and esthetic dentistry, earning a master's degree from the International University of Catalonia (UIC) in Barcelona, Spain, where he is an associate professor in the Pediatrics Department. He has developed and currently is developing various materials and instruments for esthetic dentistry and photography in collaboration with international companies. A scientific consultant for two European journals and author and coauthor of many publications in international journals, Dr Manauta is frequently invited as a lecturer in these topics.

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My family was very intrigued about my lifelong passion for dentistry since I was a child; in fact it was my first choice before a career as an astronaut - at the time I was very serious. My grades reflected this during my studies, even until the very end. The decision to become a dentist was made the day I stepped into a dental office disguised as a young dentist; from that moment I realized that other fields would not allow me to treat patients and at the same time be involved in the artistic work that science is not able to capture and which I found fascinating. I can affirm that becoming a dentist was a decision made with my heart, no brains involved. The same thing happened when I decided to continue my postgraduate education. During that period I found some arrows pointing to an obvious direction, the direction I liked the most.

My first contact with serious esthetic dentistry came one morning when I opened a book about laboratory techniques and ceramic layering. The surprise came when I saw that the author, one of the best technicians in the world, lived a few blocks away from me in Barcelona. I had the chance to meet him, and he told me that the amazing level he had reached had nothing to do with innate skills. The skill he developed was attaching his bottom to his workbench chair.

The only way to feel satisfied is to do a job that you believe is a great job, and to do a great job you need to love what you do, so I wanted to be like the professionals I admired at any cost.

I felt as if I was looking at magicians, but I could not be more wrong. Actually their way of handling materials was quite similar to mine, but I questioned why my restorations were so deficient compared to theirs. Was I not using enough colors? What was wrong? I attended many courses and congresses. After a scientific weekend, I used to arrive to the office on Monday and try to emulate my gurus, generally with little success, and after little attempts I felt discouraged and returned to my old habits. It was really hard to distinguish who was an amazing clinician or who lived only to create beautiful presentations.

After some sweat and tears along the road, I realized that personal skills and artistic talent are only an insignificant help. The real helpers here are protocol, neatness, patience, repeating restorations countless times, and of course knowledge. Layering composite made me understand my dull mistakes and helped me to start making worthwhile efforts while restoring teeth.

That is why we entitled this book *Layers*, honoring this noble praxis that should be spread to everyone who is in love with teeth. So here I leave you all the information I have been able to gather, but I want to deliver it to you as my teachers did once with me, unconditionally and with no secrets whatsoever.

Jordi Pérez-Manauta

Dr Anna Salat

Born in Barcelona, Dr Anna Salat graduated with a degree in dentistry from the International University of Catalonia (UIC) in Barcelona. She continued her postgraduate studies in implantology and esthetic dentistry, earning a master's degree from UIC, where she is an associate professor in the Esthetic Dentistry Department. Dr Salat is particularly interested in conservative dentistry and esthetic restorations and lectures internationally on these topics. She has contributed articles to a number of international journals.

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Until a few years ago I practiced general dentistry: I used to lute crowns that I considered "esthetic," or made chameleon-like composite restorations that looked perfect but in the end seemed poorly integrated into the tooth structure. These experiences resulted in a lot of frustration, disappointment, dissatisfaction, and, in my opinion now, an absolute esthetic failure of the treatment.

The truth is that no patients ask for a "nonesthetic treatment." It is our duty to fabricate well-integrated restorations that mimic the natural tooth structure to satisfy our patients. Once a patient told me he was searching for a dentist to cause him to "crack a smile." I thought about the double meaning of this expression: A patient goes to the dentist to improve his smile, but often the treatment turns out to have the opposite result. In many cases, haven't we seen a worse clinical situation after treatment? Think about all those fixed prosthetics with subgingivally located margins that lead to chronic gingival inflammation, overhanging restorations, restorations with inadequate color, form, or texture, and so on. Unfortunately, even overtreatment is not uncommon.

Therefore, I decided I wanted to improve my skills in what we call *esthetic dentistry*. In this way I discovered the world of conservative dentistry, maybe better known as *minimally invasive dentistry*, which at the same time was esthetic.

This decision has changed my professional life. Being able to add material to the tooth structure without having to damage even more enamel or dentin, for example, in the case of a fracture of an anterior tooth, where some decades ago a root canal treatment and fixed prosthetics would have been performed. Nowadays, if we stratify the restoration correctly, we can restore this same tooth in a way that perfectly simulates the natural tooth structure, and is therefore invisible to the human eye, without destroying the tooth substrate.

Thanks to adhesion and new composite resins, we are able to offer our patients alternative treatments that are highly satisfying, minimally invasive or noninvasive, versatile, and highly esthetic. I've discovered a whole new world where patients are satisfied and, therefore, I am satisfied as well.

I would like to thank those who motivate me with the quality of their work and give me impetus to improve my clinical skills every day even more. I would especially like to thank the professors who have guided me in my clinical work, Miguel Roig and Luis Jané, chairmen of the Masters of Esthetic Dentistry program at International University of Catalonia in Barcelona, as well as all my teachers at UIC. In addition, thanks to all the professionals whose high-quality results motivate me to improve every day: Walter Devoto, Lorenzo Vanini, Luiz Narciso Baratieri, Angelo Putignano, Daniele Rondoni, and Francesco Mangani among many others.

Anna Salat

Foreword

While writing the presentation for Jordi and Anna's work, this verse by Henry Wadsworth Longfellow came to mind:

In the elder days of art,
Builders wrought with greatest care
Each minute and unseen part,
For the Gods see everywhere

The meaning of this sentence is clear; artists and artisans of the past had the self-discipline never to allow themselves shortcuts or leave loose ends. They took care with every detail, even with invisible things, because they firmly believed that the final judgment on their work was passed not by others, but by something much higher, their own conscience.

We had the same sensation while exploring these pages.

Jordi and Anna, our students in the recent past, have grown up knowing that professional success is inextricably bonded to one word: PASSION. Passion leads us to be curious, to explore new materials and techniques in order to improve our skills, to follow strictly the knowledge of our teachers, and to repeat countless times these exercises until the desired result is achieved.

In this text, passion is breathed on every page, from the exciting and illuminating step-by-step pictures, through the care taken in every graphic detail, to the words of all the colleagues who have agreed, enthusiastically, to introduce the different chapters.

This is not a book that will sit unread in your dental library, accumulating dust. Instead it will be browsed daily by students, young dentists, and expert colleagues looking for inspiration for their esthetic restorations, encouraged by exposure to the details that make the difference in our profession.

Philosophy can become science, but to do so, art has to get involved in between, and in this book none of them are missing.

We wish the two young authors the editorial success that they deserve, confident that their passion will involve all of us.

Good reading.

Walter Devoto and Angelo Putignano



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To our assistants in Italy and Spain. Half of what we are is because of you.

To the ones who have suffered from our chaos and desks full of composites. Let us dedicate this book to you. In the end it was not such a mess. We love you!

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To anyone whom we wrongly and unfairly did not mention. Unfortunately we do not have enough space in this whole book to mention everyone we wish. Forgive us.

An apology to our family and friends — nothing, absolutely nothing, is worth spending time away from you.

Sincerely,
Jordi and Anna



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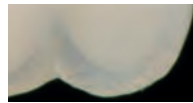
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