



## Meet Our Management

Introducing **Butch Connelly, Crown and Bridge Manager** for Gnathodontics, Ltd. Some of you may have spoken with Butch recently on crown and bridge cases. Butch comes to Gnathodontics with 15 years of crown and bridge experience from a small, high quality, fixed laboratory in Idaho that was formerly based in the Denver area. He brings excellent technical, managerial, and communication skills to our busy Crown and Bridge department, and we are glad to have him. Butch can be reached at 303-424-9515, extension 150. Welcome Butch!

As we are steadily growing, Gerald Pontasch, Co-Owner, is now managing our second shift of employees in the afternoons and evenings, so don't hesitate to call Gerald at extension 121 after 3 p.m. He'll be available to assist you with any late-breaking issues or problems you might have.

Our website, [www.gnatho.com](http://www.gnatho.com), has been updated with a fresh look and brand new product and service information. Visit us for downloadable prescriptions, information on our systems, previous newsletters, and more!

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# Gnatho-Gnews

dental lab news and technology trends

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## The Bonded Porcelain Restoration

by Kevin Kelly, CDT, Ceramics Department Manager

Bonded porcelain restorations can be great solutions for many types of clinical situations. These restorations are commonly used for cosmetic procedures such as veneers, inlays, and onlays, and when properly done, have proven to be extremely successful. There have been many advances in dentistry over the past two decades, and the adhesive-luting procedure is certainly one of the major developments that has changed the way dentistry is practiced. In this article I will briefly describe our procedures and recommendations for these types of restorations.

Today's dentists are faced with an overwhelming number of materials to choose from when prescribing all-ceramic restorations. Now we can choose from pressed technologies, CAD/CAM systems, the so called "no prep veneers," and a plethora of other types of porcelains on the market. One of the techniques we often use in the laboratory is fabricating bonded all-porcelain restorations on a refractory model. These types of restorations, in my opinion, can be the best alternative in many clinical situations. They are highly esthetic, and advances in adhesive bonding have given us confidence in them from a strength and longevity standpoint. The most common application is the fabrication of porcelain laminate veneers, often used to correct alignment, diastemas, and chipped or discolored teeth. Minimal tooth preparation (generally .5mm facial reduction) is required, which provides our technicians with clearance for ceramic layering to achieve desired esthetics and proper interproximal contours. The teeth are prepped, the impression is taken, and the case is sent to the lab. To achieve the maximum esthetic result, the dental office should always provide a study cast that has been approved by the patient, indicating the desired cosmetic result, as well as digital photographs, and a completed Rx detailing the patient's desired results.

Here in the laboratory, we then pour the master models and trim and prepare the dies for duplication. Once the master cast is ready, we duplicate the dies with an extremely accurate silicone material, and pour them with refractory material. The veneers are then layered by the ceramist using Noritake porcelains and oven fired, then contoured on the refractory model, and finally transferred back to the master dies. One of the keys to success for these restorations is the adhesive bonding procedure. Historically, we have etched the restorations before they are sent out. However, the try-in procedure always results in some contamination, so ceramic and enamel surfaces should be conditioned after try-in, not before. Always refer to the manufacturer's instructions for the specific luting



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material you are using. There are many great publications available detailing porcelain restorations and the importance of the bonding procedures required for strength and longevity.

As always, we appreciate working with you and having the opportunity to be a part of your dental team. Please don't hesitate to call me here at Gnathodontics, Ltd. if you have questions regarding our cosmetic services, or for help in planning your next cosmetic case!

## New Materials Update

by Guido Strupp, MDT

In the dental technology profession we are constantly looking for new and improved materials with the perfect esthetic result to provide our doctors.

New to our selection of cosmetic restorations is **Ceramage®**, a hybrid composite from Shofu® Dental. Ceramage is a light-curing zirconium silicate that is filled with a micro-fine ceramic. The organic polymer matrix composition of Ceramage gives the new material a homogenous structure, superior flexural strength, elastic properties, and unsurpassed polishability.

Ceramage is an extraordinary combination of durability, strength, and esthetics. Applications for Ceramage are as follows:

- Metal-supported crowns and bridges
- Metal-free crowns
- Implant restorations
- Inlays, onlays, and inlay bridges
- Long-term provisional restorations
- Characterization and modification of acrylic denture teeth



Another key benefit of this indirect restorative is the gum material. Ceramage allows us to closely reproduce the look of natural tissue on large restorations without being concerned with shrinkage from oven firing since the material is light cured. This gives us the ability to add gum tissue to our conventional ceramics without fear of framework warpage. An excellent bond between ceramic and Ceramage is achieved through use of a special bonding liquid. For the seating of Ceramage restorations you can use conventional cements. A complete selection of translucent color modifiers provides the freedom to solve inter-oral challenges more easily than with porcelain.

### Some facts about this material:

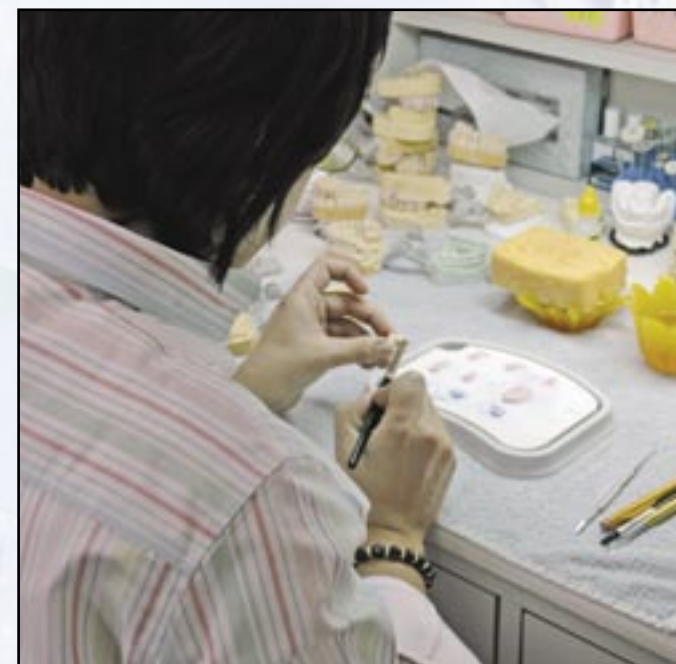
- Flexural and compressive strength beyond 140 Mpa
- Highly biocompatible
- Excellent abrasion resistance of opposing dentition
- Transmission and diffusion of light with a refractive index similar to natural teeth
- Superior color stability over 5 years
- Ideal viscosity and modeling properties
- PFS (progressive fine structure) provides superb polishability
- Fine particle microstructure resists plaque accumulation

For more information on the new Ceramage indirect restorative, give Gnathodontics a call at [800.234.9515](tel:800.234.9515).



Ceramage® is a registered trademark of Shofu® Dental Corporation.

## New Technician Spotlight: Meet Carmen Nicholas, BS, MDT, Ceramist



Carmen was born in Romania where she earned her Bachelor of Science Degree, graduating from the Dental Technology Program in Bucharest. She moved to the United States nine years ago, where she completed her Masters Degree in Dental Technology at New York University.

Carmen's passion for her work prompted her to attend many courses and seminars in advanced techniques with internationally acclaimed doctors and technicians. These include: Don Cornell, Robert Winter, Willy Geller, Oliver Brix, Luk and Patrick Rutten, and Rick Pavlak. During this time she worked in-house for Drs. Frank and Vincent Celenza, and Dr. Devin Okay. She also worked for Dr. Richard Sousa and several dental laboratories, where she gained many hands-on hours at the bench.

Carmen has considerable experience in all aspects of dental technology and focuses on functional

and esthetic restorations including porcelain laminates, pressable ceramics, crown and bridge, full mouth reconstructions, internal porcelain characterizations and effects, tooth morphology, and contours. She has a passion for learning, excellence, and integrity in all areas of her life, not just dental technology.

We welcome Carmen to our team. Bringing her vast technical experience to our Ceramics Department, Carmen will be a valuable asset in completing complex anterior esthetic cases, from metal supported crown and bridgework to layered veneers, pressable ceramics, and everything in between. She will also assist Kevin with our custom shade program here at the laboratory, which continues to grow at an amazing rate! Welcome Carmen. We're glad you're here!

## Come Join Us!

Please be sure to visit us at the 2007 Rocky Mountain Dental Convention in Denver January 18-20. Stop by BOOTH # 547 at the Convention Center and check out our live product demos of an exciting new line of intra-oral dental mirrors from Novus Dental for digital photography use. You'll love the images that you can get with these mirrors and your patients will love to see the beautiful smiles you create! We'll see you in January at the RMDC booth 547.