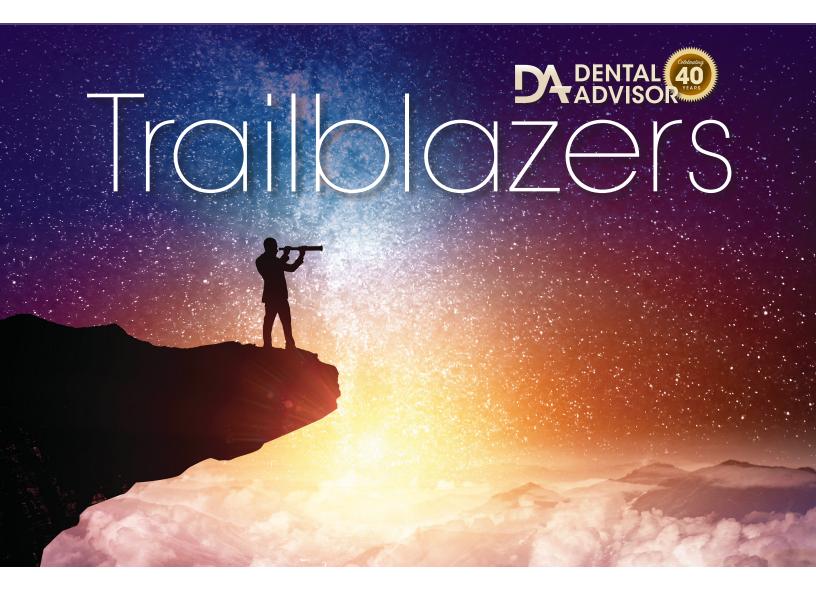
MAY-JUNE 2023 Vol. 40, No. 03

DENTAL ADVISOR[™] Product insights you can trust.







MAY-JUNE, 2023 VOL. 40 NO. 3

FROM THE DESK OF Dr. Sabiha S. Bunek CEO & Editor-in-Chief



40 years ago, we started our company with the ambition to publish quarterly information helpful to the profession when choosing products and equipment. One year later, we published our first issue of DENTAL ADVISOR, "On Making Good Impressions." What a journey we have had! We pride ourselves on unbiased evaluation both in the laboratory and clinically and have had the unique ability to work with manufacturers worldwide. Our initial mission was to "Improve Patient Care through Research and Education," and we believe we've succeeded. We could not have evaluated without the collaboration of the many wonderful companies we have had the privilege to work with throughout the years. In this issue, we are proud to present our view on the trailblazers who have made our profession of dentistry easier, smarter, and more efficient. We thank you all and look forward to another 40 years of providing product insights you can trust. As always, we love hearing from you. Please reach out to our team

THE EVOLUTION OF DENTAL ADVISOR

at connect@dentaladvisor.com or to me personally at drbunek@dentaladvisor.com

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John M. Powers, Ph.D. . Sabiha S. Bunek, D.D.S.

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Please send inquiries and address changes to:

DENTAL ADVISOR

Ann Arbor, MI 48104 Call: 800.347.1330 - 734.665.2020 Fax: 734.665.1648 Email: connect@dentaladvisor.com Website: dentaladvisor.com

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Infection Control

Vol 35, No. 4 (2018) 2018 Clinical Problem Solvers



Vol 10, No. 2 (1993)

DENTAL ADVISOR 10th Anniversary

DENTAL

ADVISOR

Product insights you can trust

DENTAL ADVISOR logo rebranding, 2018

THEDENIAL

The Best of

THE DENTAL ADVISOR

DVISOR

HOMOBING PHILLIPS

Improved Patient Con through Research

Vol 40, No. 1 (2023) 2023 Awards Issue

Vol. 40, No. 03 May/June 2023





On Making Good Impressions

DENIAI

IDVISOR

Simplifying

composite

restorations

Vol 34, No. 2 (2017) Simplifying Composite Restorations



DENTAL ADVISOR Trailblazers

Dr. John Powers

In 1983, along with other professional colleagues, Dr. John Powers founded Dental Consultants, Inc., publisher of DENTAL ADVISOR. Dr. Powers continues to be a mentor and active member of the executive team, guiding our initial mission to improve patient care through research and education. Dr. Powers graduated from the University of Michigan with a B.S. in Chemistry in 1967 and a Ph.D. in Dental Materials and Mechanical Engineering in 1972. He received an honorary Ph.D. from the Nippon Dental University in 2011. He received the 2013 IADR Distinguished Scientist – Wilmer Souder Award. He was named an AADR Fellow in 2016. Dr. Powers is Professor Emeritus, Department of Restorative Dentistry and Prosthodontics, at the UTHealth School of Dentistry at Houston. Dr. Powers has authored more than 1000 scientific articles, abstracts, books, and chapters. He is co-author of the textbooks Dental Materials – Foundation and Applications, Craig's Restorative Dental Materials and Esthetic Color Training in Dentistry.

Dr. John A. Molinari

Dr. John Molinari received a B.A. in Biology from St. Vincent College and a Ph.D. in Microbiology from the University of Pittsburgh School of Dental Medicine. He was awarded Professor Emeritus at the University of Detroit Mercy, where he served for 32 years in the School of Dentistry as Professor and Chairman of the Department of Biomedical Sciences and Director of Infection Control. Dr. Molinari was later Infection Control Director for THE DENTAL ADVISOR in Ann Arbor, Michigan from 2009-2018. He has published over 500 scientific articles, text chapters, and abstracts in the areas of microbiology and immunology, and lectures nationally and internationally on topics dealing with infectious diseases and infection control. He is co-author of the text Cottone's Practical Infection Control in Dentistry. He has served as a consultant for the CDC, ADA Council on Scientific Affairs, Council on Dental Practice, and regional hospitals.

Dr. Sabiha S. Bunek

Dr. Sabiha Bunek, CEO and principal partner of DENTAL ADVISOR, leads a seasoned team of researchers and clinicians in reporting evidence-based data relating to clinical and laboratory properties of dental products/equipment. She earned her DDS degree from the University of Michigan School of Dentistry and maintains a private practice in Ann Arbor, Michigan. Her unique and multi-faceted career as a clinician and researcher provides a valuable vantage point to bridge the gap between science and real-world clinical applications. Dr. Bunek started as the Clinical & Associate Editor for DENTAL ADVISOR in 2006 and became Editor-in-Chief in 2012. She was named Chief Executive Officer in 2015.



Dr. John Powers and Dr. Sabiha Bunek



Dr. John Molinari in the lab

Dr. Powers, DENTAL ADVISOR has been a trusted resource for four decades. What areas do you see as accomplishments, and where do you think DENTAL ADVISOR is headed in the future?

I am proud to say that we are accomplishing what we set out to do when we initially founded the company. Our motto was "To Improve Patient Care through Research and Education." We've successfully grown both our biomaterials and microbiology research to provide standardized testing of dental materials and equipment. We have a large group of clinical evaluators nationwide, who provide invaluable feedback on the use of products and equipment in everyday practice. Working with manufacturers at every level from pre- to post-market allows us to share ways to improve that make a difference to the end user, and to the patients they see in practice. We are respected for our honest, unbiased insights, and are a trusted resource to both dentists, their teams, and to manufacturers. In the future, we will continue to grow in both services to the profession and as a team of leaders. We pride ourselves on a terrific team that works closely to deliver quality work to the profession.

Dr. Bunek, what is your vision for the future of DENTAL ADVISOR?

I am focused on bringing on a diverse leadership team to continue to provide leading evidence-based research and clinical validation to the dental profession. Along with this comes the expansion of our research and validation capabilities in growing segments, such as artificial intelligence and 3D printing in addition to advancing marketing initiatives that will increase our digital presence and accessibility of our scientific research and clinical evaluations.

TRAILBLAZERS: ADHESIVE CEMENTATION



Kuraray Noritake has led the world in adhesives, introducing the key adhesive monomer in dental history which led to the development of an MDP monomer contained in *Panavia* cement. This improved MDP monomer has proven extremely effective in use on dentin, enamel, and metal. Kuraray Noritake is a global leader in bonding technology, with the development of *CLEARFIL* bonding products, a gold standard in dentistry. DENTAL ADVISOR biomaterials laboratory has completed several research projects on bonding, which showed consistently high bond strengths.

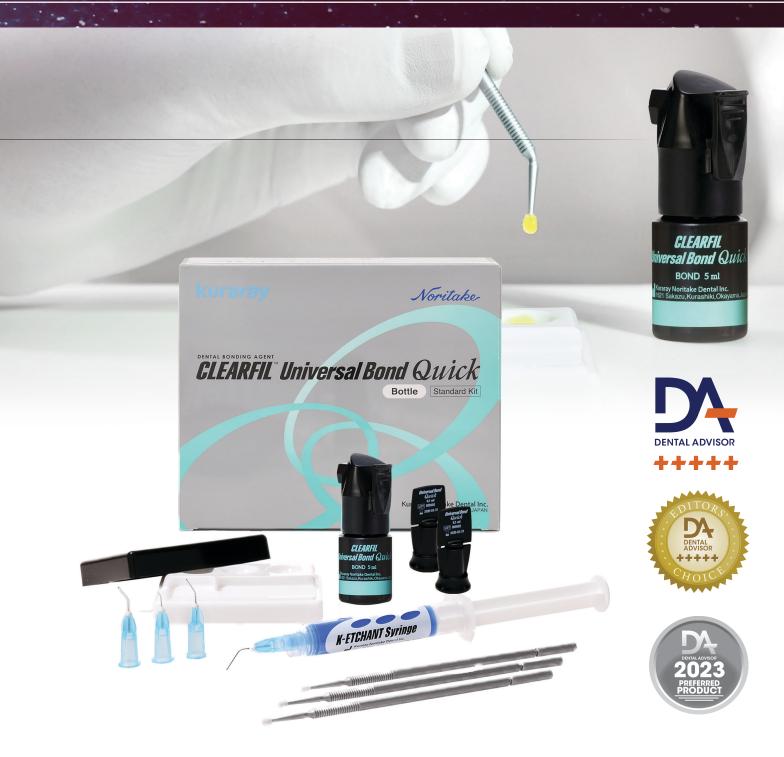


Kuraray Noritake began manufacturing dental materials in 1973, and in 1978, released the first product in the *CLEARFIL* line, *CLEARFIL BOND SYSTEM-F.* Since then, the *CLEARFIL* line has extended to several products, including the most recent *UNIVERSAL BOND QUICK*. This monomer was the same as in the *Panavia* products, and made Kuraray Noritake a leader in adhesive cementation. DENTAL ADVISOR has performed many studies on *CLEARFIL* Products, including clinical evaluation, comprehensive laboratory testing, and long-term studies, using Kuraray Noritake composites in conjunction with *CLEARFIL* bonding products. Results have been consistently excellent in lack of marginal staining, bond strength, and lack of debonds.



DENTAL ADVISOR Biomaterials Research Laboratory has tested and confirmed high bond strengths for PANAVIA V5 (Research Report #67, 68), PANAVIA SA Universal (Research Report #132), CLEARFIL SE BOND 2 (Research Report #147)

Dental Traiblazers



CLEARFIL Universal Bond Quick uses the same MDP monomer invented by **Kuraray Noritake**, but adds a new AMIDE monomer. AMIDE offers a rapid bond technology, by infiltrating dentin and enamel quickly. It dramatically reduces water absorption, and decreases application time.

CLEARFIL Universal Bond Quick is indicated for use in all etch techniques, with any light-, self- or dual-cure material. DENTAL ADVISOR Biomaterials laboratories confirmed excellent bond strength to dentin and enamel in both total- and self-etch modes after 5,000 Thermocycles and compared it to competitor bonding agents.

DENTAL ADVISOR Biomaterials Research Laboratory has tested and confirmed high bond strengths for CLEARFIL UNIVERSAL BOND QUICK (Research Report #99)





A leader in dental equipment, **Midmark Corporation** has innovated thousands of practices across the country through their experiential design process. The Midmark Experience Center allows practitioners to visit and explore all options for designing their practice to be the most efficient, streamlined, and effective. Midmark Elevance Dental Chair





The *Midmark M11® Steam Sterilizer* is a favorite of many dental professionals. With a large capacity, easy operation, and quick cycles, it helps improve efficiency. The signature feature of the *M11®* and *M9® Steam Sterilizers* is the door open function, whereby the door pops open at the end of the cycle to facilitate drying. This feature helps dental professionals save time throughout their busy day so that sterilized, dry instruments are always ready.



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DE DENTAL TOUDOZES

DENTAL ADVISOR TRAILBLAZERS: COMPOSITE





Addent[™] and Concise were the earliest **3M** composites. Our very own Dr. John Powers tested them while at The University of Michigan School of Dentistry. Addent[™] composite is recognized as the first tooth-colored restorative on the market. *Z100* and *Z250* composites were tracked in vivo by DENTAL ADVISOR and hold the record for longevity of long-term studies at DENTAL ADVISOR.

We published a 15-year report on **Z100**, a 9-year report on **Z250**, and a 10-year on **Filtek® Supreme**.





The *Filtek Family* of composites was introduced in the late 1990s, including *P60*, a composite designed for posterior restorations. Since then, many versions of *Filtek* have been continually improved in **3M Laboratories**. *3M Filtek Universal Restorative*, their latest version, received Top Universal Composite two years running at DENTAL ADVISOR. The *3M Filtek Matrix* is a new innovation from **3M**, whereby a custom anterior matrix is 3D printed through a digital workflow. *3M Filtek Matrix* offers an efficient, cost-effective and less invasive solution for anterior restorative procedures, and was designed to be used with esthetic, long-lasting universal composites such as *3M Filtek Supreme Ultra* and *3M Filtek Universal Restorative*.

We have tested multiple products by **3M** over the years, and they are a consistent leader in several categories, constantly innovating and moving the industry forward. Both *Filtek Supreme Flowable Restorative* and *Filtek ONE* have received research awards from DENTAL ADVISOR for their outstanding physical properties.

TRAILBLAZERS: SILVER DIAMINE FLUORIDE

SDI

An innovator in Silver Diamine Fluoride, **SDI** has paved the way for minimally invasive dentistry using a unique 2-step process that reduces staining. *Riva Star SDF* was introduced to the market as a preventive fluoride treatment and used worldwide. More recently, **SDI** launched *Riva Star Aqua* which improved procedure time by not requiring a gingival barrier or the need for refrigeration. Both products continue to soar in popularity and are recommended to use on pediatric, adult, and geriatric patients in conjunction with *Riva Self Cure*.







TRAILBLAZERS: SINGLE DOSE



Centrix introduced the dental community to the concept of single-dose products. Dr. Dragan developed and patented the first practical syringe delivery system for composites in 1970. This was the original *Mark I* syringe and the *C-R®* (Composite Resin) tube and plug. Since then, **Centrix** has continued to develop and market single-dose products which save time and improve efficiency.

The goal of **Centrix** is to continue to develop better delivery systems and related products while helping the dentist in his everyday practice.



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DENTAL TROUBLOZERS





Monobond[®] Etch & Prime

Ceramic Primer

Ivoclean

Cleaning Paste

DENTAL ADVISOR Biomaterials Research Laboratory has confirmed the efficacy of improved bond using all of these products on ceramics.

Monobond® Plus

One Component Primer



DENTAL ADVISOR

VITA first introduced the concept of tooth shades A-D in 1956 with the Lumin-VACUUM. Today VITA's shade guides have become the international standard and have expanded to include VITA SYSTEM 3D-MASTER®. With the goal of precise shade reproduction, VITA offers 7 shade guides, including the new VITA Easyshade® LITE which provides objective, accurate results with the simple touch of a button.

We may not be able to predict the future. But we can shape it.







Dentsply Sirona leads the world in innovative products and equipment. Dentsply International created the first dental air driven handpiece, the airotor, in the 1950's. In the 1960's, the Cavitron **30-B** was invented and changed hygiene scaling forever. In the restorative space, IRM was created as a intermediate restorative material, and used during the Vietnam War to avoid unnecessary extractions. In the 1880s, Sirona created the first commercial x-ray unit for dentistry, just three days after it was introduced in medicine. Also in the 1880s, Sirona produced the first electric powered



dental drill. In 1956, a motorized dental chair and delivery system was introduced under the Siemens brand. In the late 80s, CEREC was introduced as an intra-oral camera scanner which used CAD to design chair-side restorations and manufacture them in office using a dental mill in a single visit.

DE DENTAL O TROIDOZERS

Nabers Diamond

TRAILBLAZERS: INSTRUMENTS/CASSETTES



In 1945, **Hu-Friedy** introduced their first line of *Gracey* instruments and scalers. In 1985, they introduced their cassette system, a gold standard for organizing instruments by procedure, and preventing instrument sticks during reprocessing. The cassettes are widely used in dental schools nationwide. In 2019, they were acquired by **Cantel** and merged with **Crosstex** to form **HuFriedyGroup**.





TRAILBLAZERS: INFECTION CONTROL



In 1953, **Crosstex** was founded as a disposable towel and bib manufacturer. Since that time, they have become a leader in masks with *Secure Fit* [™]*Technology*, and several other infection control products, including **DentaPure Waterline** cartridges which were tested by DENTAL ADVISOR over a year and were able to successfully reduce and achieve control of waterborne bacteria in dental waterlines for a one-year test interval.





, 'GC', '

GC America is a leader in Glass lonomer Technologies. With the advent of *GC Fuji®* products, *GC America* is a global leader in minimally invasive restorative products which release fluoride. Due to its low solubility, Glass ionomers chemically bond to dentin and enamel without preparation. This conserves natural tooth structure. *GC Fuji®* products are available in powder/liquid, capsules, and automix cartridges. The *Fuji®* line has evolved over the years. Many restoratives and cements have been created using the technology which is relied upon by dentists worldwide to serve their patients. The latest product, *EQUIA Forte® HT* is a glass hybrid restorative which has increased translucency to blend with existing tooth structure. *EQUIA Forte® HT* is the 2023 Top Award winner for Glass lonomer Restorative.



TRAILBLAZERS: UNIVERSAL SHADE COMPOSITE



A leading developer of unique composites, including **Estelite Sigma Quick**, a long-time DENTAL ADVISOR Award Winner, due to its chameleon effect and outstanding handling. More recently, **Tokuyama** developed the first single shade composite, **OMNICHROMA**, which mimics all shades and produces a chameleon effect.











OMNICHROMA Flow BULK

OMNICHROMA & OMNICHROMA Blocker

OMNICHROMA Flow & OMNICHROMA BLOCKER Flow

MADVISOR TROUBOZERS

TRAILBLAZERS: DENTIN BONDING



BISCO was among the first companies to develop dentin bonding agents with the advent of the *All-Bond* system in the late 70s. Since then, they have become a worldwide leader in dentin bonding. Our very own Dr. John Powers worked with Dr. Byoung Suh in the early years of development of *All-Bond* and future products.



All-Bond 2



All-Bond 3

One-Step

NE-ST





All-Bond Universal

TRAILBLAZERS: BURS/DIAMONDS



SS White leads the category of carbides and diamonds, introducing the first steel bur in 1872. Since that time, **SS White** has expanded their cadre of materials to include endodontic files, specialty burs, and laboratory burs. It all began with Samuel Stockton White, who was an apprentice dentist and started the company manufacturing porcelain teeth in Philadelphia, Pennsylvania. **SS White** continues to be a consistently reliable and quality company to depend on for burs and diamonds. S.S White Dental Manufacturing, Staten Island Factory, Prince Bay, N.Y.







Founded in 1932, **Septodont** is a dental pharmaceutical company that has established itself as a global leader in dental anesthetics. Since its inception, **Septodont** has been at the forefront of developing, manufacturing and distributing a wide range of high quality dental products all over the world. **Septodont**

has launched and maintained well established brands including **Biodentine, BioRoot**, and **Septocaine**. **Septocaine** was introduced in 2000 as a new generation of anesthesia and continues to be the most popular anesthetic on the market in the US. **Septocaine** offers profound anesthesia, fast onset (1-9 minutes), and predictable duration for infiltration and nerve-block injections. Additionally, **Septodont** has a successful range of dental injection needles. Of these, the **Septoject Evolution** is a multiple year DENTAL ADVISOR award winner after being highly rated by our clinical evaluators. Favored features of this needle were the ease of insertion due to the patented scalpel-designed bevel and the bevel and orientation markings.



TRAILBLAZERS: PATIENT CHAIR/HANDPIECES

DENTALEZ



Dental EZ: In 1958, the first fully reclined dental chair was introduced and changed the practice of dentistry. Dentists and their assistants could now sit down and practice what we now know as four-handed dentistry.



Star Dental, the handpiece division, created the first nonlubricated handpiece turbines, shortening reprocessing time. In addition, they were the first company to introduce *fiber optic handpieces*, allowing dentists to illuminate the oral cavity during procedures. Later, they invented the first push button auto-chuck and quick disconnect handpieces, allowing for procedure and sterilization efficiency.



StarDental® 430 Torque Handpieces

DE DENTAL O TROIDOZERS

DENTAL ADVISOR TRAILBLAZERS: TEMPORIZATION



Luxatemp is a market leader for temporization and boasts the first cartridge dispensed provisional material. **Luxatemp** has evolved into several iterations, including **Luxatemp Fluorescence**, **Luxatemp Ultra**, and **Luxatemp Plus**.

TRAILBLAZERS: LIGHT CURING & DISINFECTANT WIPES

Kerr

The Kerr Company was founded in the USA in 1891 by the brothers Robert and John Kerr under the name "The Detroit Dental Manufacturing Company" and exported its products to Europe as early as 1893. The company name was changed to The KERR Manufacturing Company in 1939. With the acquisition of Demetron, **Kerr** is owner of the leading curing light technology, first introduced in the early 1980s. In the early 90s, Metrex was the first company to introduce disinfectant wipes, called **Metriwipes**. Since then, the **Cavicide Brand** has been the market leader in disinfection, used by thousands of dental offices.

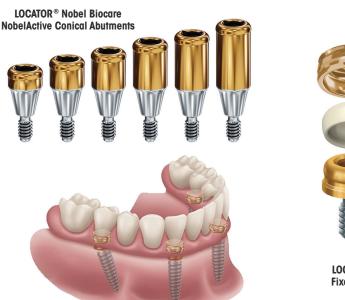


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Zest originally was a dental lab, where Max Zuest began to identify problems with overdenture cases. It was then that the first Zest attachment was created. In 1977 Mr. Zuest's son, Paul, joined the team and the Zest Anchor Advanced Generation (ZAAG) attachment was created for all major implant systems. Since then, the LOCATOR® Attachment is now the go-to company for complex overdenture cases and is a world leader in attachments.





LOCATOR® Fixed Gold

TRAILBLAZERS: HEMOSTATIC AGENT

Dr. Dan Fischer, a dentist, felt that rapid, profound hemostasis was imperative for quality operative dentistry.



Because there were no products on the market that predictably controlled bleeding and sulcular fluid, he developed one.

Ultradent's products, **Astringedent**[™], and later **Viscostat**[™], resulted from Dr. Fischer's insight, determination, and willingness to work after hours—using his own blood to test his efforts—to produce exactly what he felt the market needed. DENTAL ADVISOR continues to see these products as leaders in the category.



ADVISOR TROUBLAZERS

DENTAL ADVISOR RAILBLAZERS: CLEAR ALIGNERS



In 1999, Align Technologies pioneered the invisible orthodontics market with the introduction of Invisalian. Combining digital treatment planning and mass production,

the orthodontic industry was forever changed. Years later, with the acquisition of *iTero*, Align made it easier to capture digital data in-office, using software algorithms to treatment plan and show predicted results to patients. Align now leads the world in clear aligner innovation. The iTero 5D is the latest innovation which contains a scanner, an intra-oral camera, a caries detector, and a software which tracks occlusal wear. Each clear aligner case offers a treatment proposal which provides the patient with a before and after to aid in case acceptance. Although Align began as an orthodontics company, the *iTero* scanner is also utilized for indirect restorative cases.



iTero Flement 5D



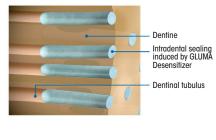
DENTAL ADVISOR Clinical Case Report #48 iTero Element Restorative Scanning

DENTAL ADVISOR RAILBLAZERS: DESENSITIZER



A leader in desensitizing, GLUMA® Desensitizer continues to be the product of choice by dentists to eliminate sensitivity. Dental Advisor has reviewed GLUMA,® GLUMA® Comfort Bond, and GLUMA® **Power Gel.** all iterations of the same technology which successfully addresses the issue of patient sensitivity both before and following restorative procedures. **GLUMA**[®] has an antibacterial effect whereby it provides a seal that acts as a microbial barrier. It may be used with any restorative material in any clinical indication and does not affect bond strength.

















VOCO was the first company to create a composite with *nano-ORMOCER®* technology which is contained in *Admira Fusion*. They also invented single-dose blister packaging for *Futurabond*.





PHILIPS

Zoom! Whitening became a household name for in-office rapid whitening, completed in just one visit. To date, **Phillips** maintains the **Zoom!** brand for both in-office and patient take-home whitening and is a leader in the category of whitening. DENTAL ADVISOR tested the efficacy of lightassisted whitening and found that rapid whitening was enhanced by the use of a light during treatment.





2023 CHICAGO MIDWINTER MEETING





Pierrel Preferred Product: Goccles Deborah Laird and Fabio Veloti





SHOFU Preferred Products: OneGloss and Super-Snap X-Treme Mike Gainsburg, Michelle Jacobellis and Garrett Pizzaloto





voco

Top Awards: Profluorid Varnish, Admira Fusion x-tra, Ionolux, Provicol QM Plus Zoran Pantelin





Cavex Holland BV Top Award: Cavex Cream Alginate Sander Hagermans and Hans Maarten Den Boer



OMNICHROMA



Tokuyama

Top Awards: OMNICHROMA & OMNICHROMA Flow Azmeraye Tesfaye, Daniel Mula, Gurvinder Chahal, Lily Nguyen and Abir Bou Khouzam

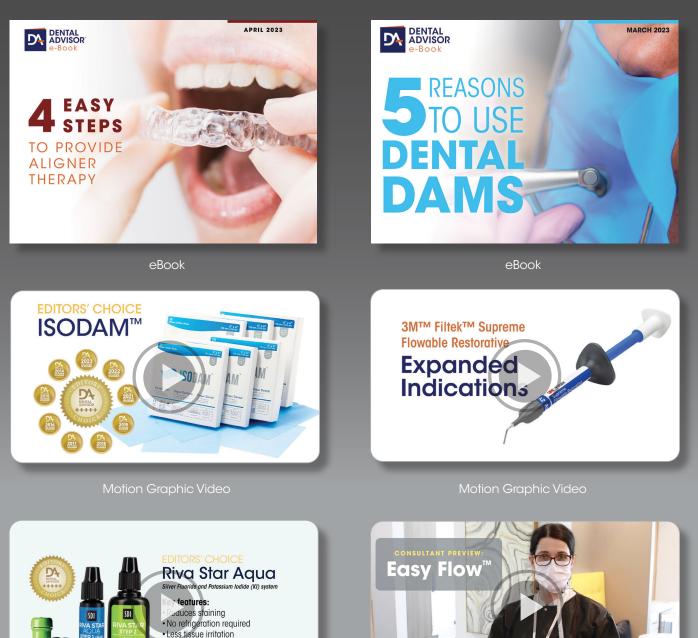




Denmat Top Award: Firefly Cordless Headlight System Sam Danak

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Water-based, ammonia-free

Motion Graphic Videc

formulation

Clinical Video



DINIAL

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