

## Fotona

# Advancing dental laser technology

Fotona's LightWalker is a revolutionary dental laser system, incorporating state-of-the-art technologies that redefine the industry. With 20 W of power, 2 wavelengths, 5 pulse durations, and 4 special pulse modalities, LightWalker offers dentists an unparalleled range of clinical applications.

The precision and improved ablation efficacy of LightWalker's patented QSP mode make it invaluable for hard-tissue treatments, debonding veneers, orthodontic brackets, dental aesthetics, and surgery, addressing various challenges with a single solution.

Practitioners are thrilled by the efficacy of the LightWalker's SWEEPS mode in endodontic cases, witnessing the power of bubbles in cleaning narrow root canal spaces, removing smear layer, de-

bris, and biofilm. Moreover, SWEEPS extends its benefits beyond direct laser therapy, enabling non-invasive, non-surgical removal of biofilm and calculus in periodontal and peri-implant therapy.

The laser's innovative SMOOTH mode expands the horizons of dental practices, allowing them to offer Fotona's cutting-edge aesthetic and anti-snoring laser therapies. With treatments like SmoothEye®, LightWalker 3D®, LipLase®, and NightLase®, dental practices can attract new patients, fulfilling patient expectations with a wide range of non-invasive options that can enhance revenue and profitability.

Embrace the future of dental laser technology with Fotona's LightWalker, empowering dentists with unparalleled versatility for enhanced patient care.



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## Zircon Medical | Patent™

# The only two-piece zirconia implant with long-term studies

Minimum risk of fracture and predictable osseointegration—the Patent™ Dental Implant System has solved the challenges of conventional zirconia implants. Only its patented production process creates the surface roughness needed for fast and predictable osseointegration. In the last step of this revolutionary manufacturing method, process-induced microcracks are eliminated, maximising the Patent™ implant's overall strength and hardness. That the Patent™ approach works is substantiated by scientific research: In a pre-clinical study, Patent™ implants achieved bone-implant contact (BIC) of over 70% after just four weeks of healing, outperforming all other dental implants investigated in sim-

ilar studies. An independent long-term study over nine years found no implant fractures for any of the two-piece Patent™ implants investigated, as well as healthy and aesthetic soft tissue, stable marginal bone levels and no peri-implantitis. Patent™ proves that long-term implant success is a reality. Learn more at [www.mypatent.com](http://www.mypatent.com).

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## CleanImplant Foundation

# Once you see it, you cannot unsee it!

In March, the CleanImplant Foundation was proud to welcome another manufacturer in the family of high-quality implant manufacturers, awarded the Trusted Quality seal. The AO Annual Meeting in Charlotte, NC, was the perfect venue to hand over the certificate of excellence to Ritter Implants.

The award was preceded by a thorough analysis of five randomly selected cross-batch implant samples from the manufacturer in the SEM (Fig. 1). In order to achieve the required quality level, a maximum of 10 foreign particles, all smaller than 50  $\mu\text{m}$ , may be present on the surface of the test samples. An independent peer review process ensures compliance with the threshold values of the CleanImplant guideline and proof of clinical performance. At present, implants from the following manufacturers have been awarded the internationally widely recognised seal of quality:

- Biotech Dental
- bredent medical
- BTI Biotechnology Institute
- Champions-Implants
- Dentis
- Dentium
- Dentsply Sirona
- Global D
- medentis medical
- MegaGen
- NucleOSS
- Ritter Implants
- SDS Swiss Dental Solutions
- Southern Implants



**Fig. 2:** Prof. Jörg Neugebauer, President of the Academy of Osseointegration, and Dr Dirk Duddeck, Head of the CleanImplant Foundation, both Germany.



**Fig. 1:** SEM mapping with material contrast (BSE imaging).

The results of the CleanImplant Foundation's extensive quality assessment studies show that residue-free implants are still not a matter of course (see cover illustration of this issue). It is not only small particulate carbonaceous plastic residues that lead to uncontrolled foreign body reactions, peri-implantitis, and bone resorption. An additional potential threat to the healing (osseointegration) following implant placement is posed by thin-layered residues of highly aggressive cell-toxic cleaning agents such as dodecylbenzene sulfonic acid (DBSA) or quaternary ammonium compounds—known for their use as pesticide and biocide—on the surface of some brand-new implants utilised before manufacturer packaging. Even in low concentrations, these chemicals are cytotoxic to cells and do not promote implant healing.

At the AO meeting, the new President of the Academy of Osseointegration, Prof. Jörg Neugebauer of Germany, met up with his former student, now head of the CleanImplant Foundation, Dr Dirk Duddeck (Fig. 2).

It was the now AO President, Prof. Neugebauer, as Dr Duddeck's supervisor at the University of Cologne years ago, who suggested the idea of a quality assessment of dental implants as the substance of his doctoral thesis. To date, more than 160,000 dental professionals following the CleanImplant Foundation on social media show how crucial and urgent this topic was back then and how it has lost none of its relevance still today.

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BEGO

## The smart (r)evolution of dental 3D printing

BEGO, a pioneer in dental material research with more than 135 years of experience, proudly announces the launch of VarseoSmile® TriniQ®. VarseoSmile® TriniQ® represents a smart (r)evolution and sets new standards in flexibility, aesthetics, and durability in dental 3D printing.

### **BEGO presents groundbreaking material for dentistry and dental technology**

With the market introduction of VarseoSmile® TriniQ®, BEGO brings a smart (r)evolution to dental 3D printing. This new material enables the printing of definitive, permanent three-unit bridges for the first time and offers unmatched aesthetics with 10 VITA® shades. The high material stability opens up new possibilities for permanent restorations and extensive temporary restorations.

### **Premiere at LMT LAB DAY Chicago 2024**

VarseoSmile® TriniQ® was presented to the public for the first time at LMT LAB DAY Chicago 2024, which took place from 22 to 24 February 2024. This event offered the first opportunity to experience the groundbreaking properties and applications of VS TriniQ® firsthand.



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Straumann

# Ceramic Healing Abutments: the first step to harmonious soft-tissue healing



These healing abutments for Straumann bone level implants enable aesthetics from the day of surgery and offer favourable conditions for soft-tissue attachment, thereby supporting a healthy peri-implant environment. Their well-proven zirconia material helps surgeons and prosthodontists who are looking for less plaque attachment (smoother surface compared to titanium) and they support soft-tissue healing from

the day of surgery. In general, more favourable soft-tissue attachment around zirconia than around titanium can be observed, with blood circulation similar to that around a natural tooth, as well as a more mature and pronounced soft-tissue integration. This comes with an ease of use entailing aspiration security thanks to the integrated screw and a colour-coding to clearly identify the corresponding prosthetic platform.



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