



Academy of Prosthodontics Annual Scientific Session San Diego, California | June 1 – 4, 2022

Program Speaker – Amirali Zandinejad

Title

Zirconia in Dentistry: From Milling to 3D Printing and Revealing the Unlimited Potentials

Abstract

The unique properties of zirconia ceramic have attracted the attention of dental professionals. Since its introduction in dentistry, subtractive technology or milling has been the main approach for manufacturing zirconia restorations. However, Additive Manufacturing Technology (AM), also known as 3D printing, is an alternative manufacturing technology used to manufacture zirconia restorations, primarily using Stereolithography and Direct Light processing. This new technology enables the production of parts with complex geometries and high precision. The potential of the Additive Manufacturing technique to fabricate objects with controlled properties will expand its application in dentistry to fabricate bio-inspired dental restorations.

Learning Objectives

1. Review the advantages and various applications of zirconia in restorative dentistry
2. Advantages of additive manufacturing and available technologies for 3D printing zirconia
3. The properties of 3D printed zirconia and its application in clinical dentistry
4. The bio-inspired dental restorations and the future of 3D printing zirconia in dentistry

Biography

Dr. Zandinejad, prosthodontist, is a full time tenured associate professor and director of AEGD program at Texas A&M, college of dentistry in Dallas and maintains his private practice limited to esthetic and implant dentistry in Arlington. Dr. Zandinejad completed his dental training in 1996 and continued his education by finishing multiple residency programs in operative dentistry, AEGD and prosthodontics. He started his academic career as assistant professor in Louisville and joined Texas A&M college of dentistry in 2015 as the director of AEGD residency program, where he promoted to associated professor with tenure in 2017. He is the author or co-author of more than 60 scientific manuscripts and abstracts, serves as reviewer for many scientific dental journals and holds multiple patents on new prosthetic design and bio-inspired dental restorations using 3D printing technologies. He lectures nationally and internationally on new technologies, implant and esthetic dentistry.