



Academy of Prosthodontics Annual Scientific Session VIRTUAL May 21 – 22, 2021

Program Speaker – Joseph M. DeSimone

Title

Digital Transformation in Manufacturing to Improve Oral Health

Abstract

Additive manufacturing advances are rapidly changing the way many industries design and manufacture products. In the dental industry, Continuous Liquid Interface Production (CLIP) digital 3D printing—also known as Carbon Digital Light Synthesis™—gives dental labs the ability to print accurate, high-quality dental products up to 10 times faster than traditional methods such as milling. Digital design and high-volume production capabilities are joined with improved materials, resulting in the industry's first fully integrated digital manufacturing platform for dental and orthodontic labs, enabling improved workflows and products including thermoforming aligners, dental and orthodontic models, night guards, surgical guides, and dentures.

Learning Objectives

1. Carbon Digital Light Synthesis™ technology enables efficient digital workflows for a range of dental products.
2. Learn about the range of top-quality biocompatible, FDA cleared, high-strength dental resins available to use with Digital Light Synthesis™.
3. Learn how digital production with Carbon technology can enable more efficient and cost-effective workflows with potentially less chair time for the same or better clinical outcome.

Biography

Joseph M. DeSimone is the Sanjiv Sam Gambhir Professor of Translational Medicine and Chemical Engineering at Stanford University. He holds appointments in the Departments of Radiology and Chemical Engineering with courtesy appointments in the Department of Chemistry and Stanford's Graduate School of Business. Previously, DeSimone was a professor of chemistry at the University of North Carolina at Chapel Hill and of chemical engineering at North Carolina State University. He is also Co-founder, Board Chair, and former CEO (2014 - 2019) of the additive manufacturing company, Carbon.

DeSimone is responsible for numerous breakthroughs in his career in areas including green chemistry, medical devices, nanomedicine, and 3D printing, also co-founding several companies based on his research. He has published over 350 scientific articles and is a named inventor on over 200 issued patents. Additionally, he has mentored 80 students through Ph.D. completion in his career, half of whom are women and members of underrepresented groups in STEM. In 2016 DeSimone was recognized by President Barack Obama with the National Medal of Technology and Innovation, the highest U.S. honor for achievement and leadership in advancing technological progress. He is also one of only 25 individuals

elected to all three branches of the U.S. National Academies (Sciences, Medicine, Engineering). DeSimone received his B.S. in Chemistry in 1986 from Ursinus College and his Ph.D. in Chemistry in 1990 from Virginia Tech.

Presenter has disclosed Affiliation/Financial Interest with the following company: Carbon