Academy of Prosthodontics 2019 Annual Scientific Session
Fairmont Banff Springs Hotel, Banff Canada May 29 – June 1, 2019

Program Speaker – Van P. Thompson, PhD, DDS

Title

Ceramic Fatigue-Beauty and the Beast

Abstract

Fatigue is the primary failure mode of restorative materials. Presented will be the mechanisms of materials fatigue and its testing with an emphasis on ceramics with emphasis on modern glass- ceramics and zirconia. Slow crack growth and its thresholds will be detailed, and clinical relevant testing methods for fatigue life estimation presented. How adhesive cementation can influence fatigue outcomes will be detailed. Fatigue will be discussed in relation to clinical stress levels and how stress levels change with bruxism.

Learning Objectives

1. Understand slow crack growth and stress thresholds for crack initiation
2. Become acquainted with the critical aspects of clinically relevant testing methods.
3. Describe the role of material finish and bonding on fatigue and the nature of intra-oral stress states and their exacerbation with bruxism.

Biography

VAN P. THOMPSON, PHD, DDS

Van P. Thompson, PhD, DDS, Professor Emeritus, Tissue Engineering and Biophotonics, King's College London Dental Institute, now of Tenants Harbor, Maine is known for his work on adhesion and bonded bridges at the University of Maryland and later for work on ceramic fatigue at New York University, he has published many articles and made numerous presentations on dental biomaterials in the U.S. and internationally. His research areas include dentin caries activity, all-ceramic crown fatigue and fracture, dentin modification for bonding, engineering tissue response via scaffold architecture and practice-based research (PEARL Network).