

1995 Research Award

Principal Investigator: Professor Robert P. Kusy

Other Investigators: Mr. Scott Zufall

Title of the Project: Aesthetic Composite Archwires Processing Improvements and Evaluation of Stress-Relaxation Characteristics

Institution: University of North Carolina at Chapel Hill

Brief Summary: The long-term objective of this project was to develop an array of aesthetic archwires of uniform size and shape having a stiffness spectrum applicable to all stages of orthodontic treatment. The process used is called photo-pultrusion. Experimental work showed dramatic improvements to the symmetry of the wires with regard to reinforcement filler. Good springback characteristics and hydrolytic stability were confirmed. The potential for composite archwires with stiffness properties equivalent to those of a beta-titanium archwires were possible.