

Cartilage as a Biological Model for Studies of Thermo-Mechanical Damage by Pulsed Laser Radiation in Tissues

Alfonso R. González-Alpuche and Gerardo Gutiérrez-Juárez^{C, S}

Departamento de Ingeniería Física, División de Ciencias e Ingenierías, Universidad de Guanajuato, León, Guanajuato, México

An experimental study of the thermo-mechanical injury in *ex vivo* cartilage samples produced by pulsed radiation laser (Nd: YAG in the second harmonic, 532 nm) as a function of light energy, it is presented. It is shown that the heat damage is minimal, but the mechanical damage is very high and depends on the depth of tissue, being higher in deeper layers. The use of cartilage as a biological model for studies of thermo-mechanical damage in tissue by pulsed laser radiation is discussed in this work.