

Abstract Submitted  
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**Raman Micro-spectroscopy Study of Healthy and Burned Biological Tissue**<sup>1</sup> FARANAK ZARNANI, ROBERT GLOSSER, Department of Physics, The University of Texas at Dallas, Richardson, TX 75080, AHAMED IDRIS, Department of Surgery, The University of Texas Southwestern Medical Center, Dallas, TX 75390 — Burn injuries are a significant medical problem, and need to be treated quickly and precisely. Burned skin needs to be removed early, within hours (less than 24 hrs) of injury, when the margins of the burn are still hard to define. Studies show that treating and excising burn wounds soon after the injury prevents the wound from becoming deeper, reduces the release of proinflammatory mediators, and reduces or prevents the systemic inflammatory reaction syndrome. Also, removing burned skin prepares the affected region for skin grafting. Raman micro-spectroscopy could be used as an objective diagnostic method that will assist burn surgeons in distinguishing unburned from burned areas. As a first step in developing a diagnostic tool, we present Raman micro-spectroscopy information from normal and burned ex vivo rat skin.

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