Contribution ID: **615** Type: **Poster**

Age estimation of blood stains by reflectance spectroscopy

Monday 21 May 2018 17:45 (15 minutes)

Blood stains at crime scenes are among the most important types of evidence for forensic investigators. We can use bloodstains to determine the time elapsed since the crime took place by measuring the color changing of blood stain with reflectance spectroscopy. The color of blood stain changes with time from red to brown due to the change of chemical composition in hemoglobin that is transition of oxy-hemoglobin into met-hemoglobin and hemichrome. In this study, we determine the fractions of oxy-hemoglobin, met-hemoglobin and hemichrome at various time in period of 0-25 days under the control of temperature and humidity. The results show that determining the fractions of three hemoglobin derivatives can not be used to estimate age of blood stains more than 14 days because after 14 days, the color of blood stains remain unchanged.

Author: PLANGPLENG, Nattha

Co-author: Mr CHITAREE, Ratchapak (Assistant Professor Doctor (Asst. Prof. Dr.))

Presenter: PLANGPLENG, Nattha

Session Classification: A03: Optics and Photonics (Poster)

Track Classification: Optics, Non-linear optics, Laser Physics, Ultrafast Phenomena