

# SAIP 2011



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## **NON-SPECIALIST: Spectroscopy in Chemistry**

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### **Content :**

Since the 1960's, in many fields of Chemistry, spectroscopy is an important diagnostic tool. The key to the widespread use of spectroscopy in chemistry is that it permits one to probe the microscopic structure of molecules; the ultimate building blocks of the chemical sciences. Spectroscopy is used for a wide variety of procedures in chemistry. This talk will present an overview of the spectroscopic methods used in the Chemistry Department and the DST/Mintek Nanotechnology Innovation Centre (NIC) at Rhodes University. Examples of simple steady state absorption measurements to check the purity of synthesized phthalocyanine molecules over time resolved fluorescence spectroscopy to investigate energy transfer between phthalocyanines and nanoparticles to surface analysis with x-ray photoelectron spectroscopy will be presented. The applications of phthalocyanines range from sensors for pesticides to drugs for photodynamic therapy of cancer.

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