



# Synthesize of an Azo Compound: Investigation its Optical Nonlinear Properties and DFT Study

RESEARCH | Published: 22 December 2024

(2024) [Cite this article](#)

[Sadiq M. H. Ismael](#), [Numan S. Hashim](#), [F. A. Al-Saymari](#), [H. A. Sultan](#), [Qusay M. A. Hassan](#) , [Kawkab Ali Hussein](#), [C. A. Emshary](#) & [Hanadi M. Jarallah](#)

 23 Accesses [Explore all metrics](#) →

## Abstract

---

In the present work, a diazonium salt is prepared by a diazonium reaction of sulfamerazine in the presence of aqueous hydrochloric acid and sodium nitrate. Structural confirmation of azo compounds synthesise is achieved by mass spectrometry, infrared spectroscopy, and  $^1\text{H}$ ,  $^{13}\text{C}$  nuclear magnetic resonance. The sample geometry is derived using Density