Synthesis and chemical interpretation of 4-((4-nonylphenyl) diazenyl) aniline and 4-((4-decylphenyl) diazenyl) aniline

ABSTRACT

4-((4-nonylphenyl)diazenyl)aniline and 4-(4-decylphenyl)diazenyl)aniline are an azo compounds with different terminal chains. The synthesis process was started via diazotization of 4- nitroaniline with phenol formed 4-(4-nitrophenyl)phenol (1). After that, 4-(4-nitrophenyl)phenol was alkylated with 1-bromononane and 1-bromodecane to yield 1-(4-nitrophenyl)-2-(4-nonylphenyl)diazene (2) and 1-(4-decylphenyl)-2-(4-nitrophenyl)diazene (3), respectively. Finally, both molecules will undergo reduction to yield 4-((4-nonylphenyl)diazenyl)aniline (4) and 4-(4-decylphenyl)diazenyl)aniline (5), respectively. These two compounds were submitted to extensive spectroscopic examination, including Fourier Transform-Infrared (FT-IR) and Nuclear Magnetic Resonance (NMR).