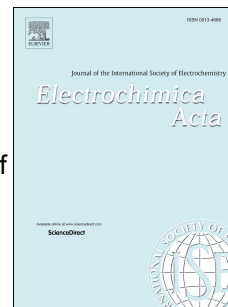


# Accepted Manuscript

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# Application of Spectroelectrochemistry in Elucidation of Electrochemical Mechanism of Azoquinoline Dye

## 2-Methyl-5-[(*E*)-phenyldiazenyl]quinolin-8-ol

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### Abstract

In situ spectroelectrochemical detection of reaction intermediates was used as a decisive method for elucidation of a rather complex redox mechanism of azoquinoline dye 2-methyl-5-[(*E*)-phenyldiazenyl]quinolin-8-ol (**R-N=N-Ph**; where **Ph** = phenyl, **R** = 2-methyl-8-hydroxyquinoline fragment). Electrochemical properties were studied in non-aqueous solution by cyclic voltammetry, UV-Vis and IR spectroelectrochemistry and high pressure liquid chromatography with diode array detector. Oxidation and reduction mechanisms involve coupled electron and proton transfers. Oxidation proceeds primarily on hydroxyl group at quinoline moiety

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