

SYNTHESIS OF POLYMERIZABLE BENZENE CONTAINING RUTHENIUM DYES FOR USING VISIBLE LIGHT WATER SPLITTING WITH SOLAR CELL

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ABSTRACT

Ruthenium dye-sensitized solar cells alternative for increasing energy demands and concerns over global warming. Ruthenium dye-sensitized solar cells based on the ruthenium(II) dyes have high stability [1]. Dye-sensitized solar cells (DSCs) based on the ruthenium(II) dyes have been shown to be very efficient candidates for photovoltaic technology due to their high stability and outstanding chemical, physical properties and good response to natural visible sunlight. Ruthenium(II) dyes has to interact with the semiconductor, and thus a range of attaching functionalities have been screened [2] thus we will use polymerizable benzene functionalized ruthenium (5) dyes for using visible light water splitting.

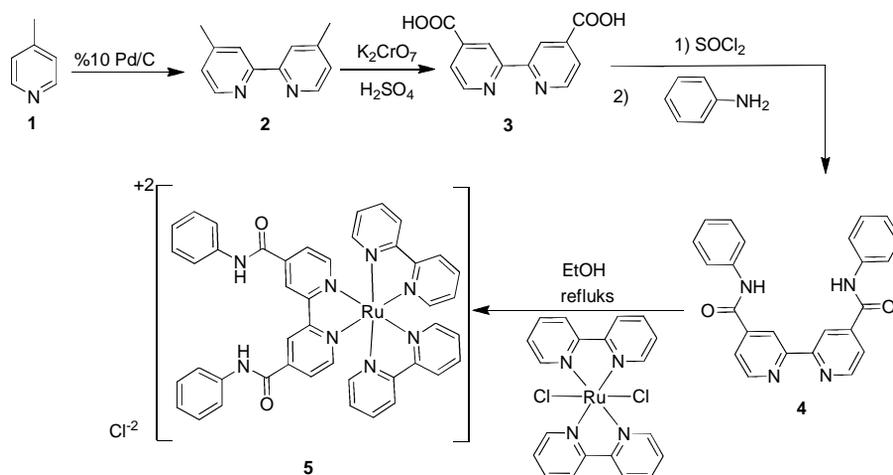


Fig 1. Synthesis of Polymerizable Benzene Containing Ruthenium Dyes

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References

¹Regan, Q.; Gratzel, M. *Nature*, **1991**, 353, 737.

²Gratzel, M. *Journal of Photochemistry and Photobiology C: Photochemistry Reviews*, **2003**, 4(2), 145.