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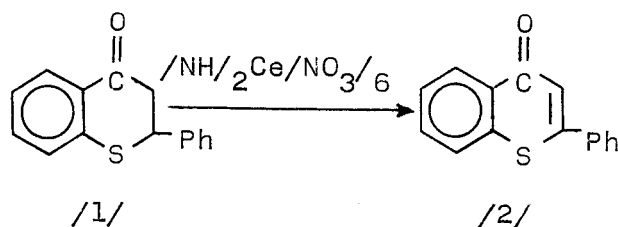
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# OXIDATION OF THIOFLAVONOIDS WITH CERIC AMMONIUM NITRATE

J. Bálint\*, M. Rákosi\*\*, R. Bognár\*\*

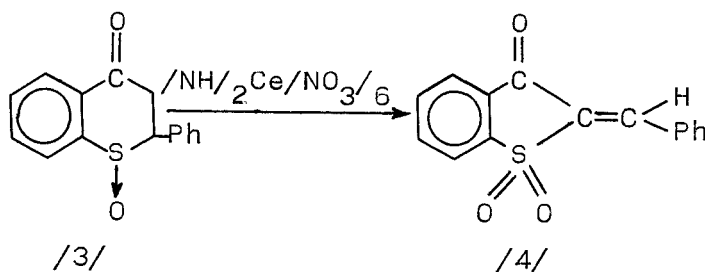
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Ceric ammonium nitrate which is used for the preparation of sulfoxides does not react with 1-thioflavanone /1/ in the expected way, since in the course of the reaction 1-thioflavone /2/ is formed<sup>1</sup>, instead of 1-thioflavanone sulfoxide /3/.



When investigating the reaction we had to exclude the possibility of the conversion of 1-thioflavanone sulfoxide, formed as an intermediate compound, to 1-thioflavone through a Pummerer-type rearrangement<sup>2</sup>, since the formation of sulfoxide during the reaction cannot be indicated.

This is also proved by the fact, that 1-thioflavanone sulfoxide /3/ with ceric ammonium nitrate gives 2-benzylidene-3-thiaindanone sulfone /4/.



Similar ring-contraction occurs in the photochemical rearrangement of these compounds<sup>3</sup> with the only difference that, with the oxygenated agent, the sulfoxide is converted to sulfone.

The sulfur atom plays a decisive role in the oxidation of 1-thioflavanone to 1-thioflavone because, ceric ammonium nitrate does not enter to reaction, with flavanone, i.e. the oxygen-containing analogue.

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