

FULL PAPERS

焦脱镁叶绿酸甲酯的Vilsmeier反应合成 δ -*meso*-甲酰乙稀基卟吩和苯并异细菌卟吩

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摘要 以焦脱镁叶绿酸甲酯为起始原料, 通过氧化反应和格氏反应将其乙烯基转化为烷酰基得到卟吩**2**, **3**和**5**。选择乙酸镍与3-取代去乙烯基焦脱镁叶绿酸甲酯反应, 将所得卟吩镍配合物与3-二甲氨基丙烯醛进行Vilsmeier反应生成卟吩中心 δ -*meso*-甲酰乙稀基卟吩**7**, 将其用浓硫酸处理则环合成苯并异细菌卟吩。

关键词 [卟吩](#), [苯并异细菌卟吩](#), [Vilsmeier反应](#), [光动力疗法](#)

分类号

Synthesis of δ -*meso*-formylvinylchlorin and Benzoisobacterichlorin by Vilsmeier Reaction with Methyl Pyropheophorbide-a

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Abstract From methyl pyropheophorbide-*a* (MPPa, **1**), the vinyl group of methyl pyropheophorbide-*a* was converted into alkylcarbonyl group by Grignard reaction and oxidization to give chlorins **2**, **3** and **5**. The Vilsmeier reaction of nickel 3-substituent-3-devinylpyropheophorbide-*a* (**6**), which was prepared by the metallation with nickel acetate, with 3-dimethylamino-acrolein/phosphoryl chloride (3-DMA/POCl₃) was carried out to give δ -*meso*-formylvinyl-pyropheophorbide-*a* (**7**) in good yield. The benzoisobacterichlorin (**8**) was obtained by the treatment of **7b** with concentrated sulfuric acid.

Key words [chlorin](#) [benzoisobacterichlorin](#) [Vilsmeier reaction](#) [photodynamic therapy](#)

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