

研究论文

3-位环庚烷(酰)基取代的焦脱镁叶绿酸-*a*甲酯的合成

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摘要 以焦脱镁叶绿酸-*a*甲酯(MPP-*a*)为起始原料, 在对其E-环羰基进行保护的前提下, 经焦脱镁叶绿酸-*d*甲酯与环庚基溴化镁进行Grignard反应; 所生成新的吡吩仲醇再经脱保护、脱水和氧化等诸多反应, 将3-位仲羟基转化成碳碳双键和羰基, 其碳氧双键再行Grignard反应并脱水成烯, 完成一系列未见报道的3-

位环庚基取代的焦脱镁叶绿酸-*a*甲酯衍生物的合成. 其化学结构均经UV, IR, ¹H NMR及元素分析予以证实.

关键词 [环庚烷](#) [焦脱镁叶绿酸-*a*甲酯衍生物](#) [Grignard反应](#) [光动力疗法\(PDT\)](#)

分类号

Synthesis of Methyl Porphyrin-*a* with Cycloheptyl(acyl) Group at 3-Position

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Abstract Methyl pyropheophorbide-*a* (MPP-*a*) was used as starting material. The carbonyl group on E-ring of methyl pyropheophorbide-*d* was protected and the Grignard reaction with cycloheptyl magnesium bromide was performed. The *sec*-alcohol obtained from Grignard reaction was subjected to deprotection, dehydration, oxidation and other more reaction for converting hydroxyl group at 3-position into carbon-carbon double bond and carbonyl group. The Grignard reaction of the carbon-oxygen double bond and following dehydration were carried out to form olefin. The synthesis of a series of new methyl pyropheophorbide-*a* substituted by cycloheptyl group at 3-position was completed. The structures of the compounds were characterized by elemental analysis, UV, IR and ¹H NMR spectra.

Key words [cycloheptane](#) [methyl pyropheophorbide-*a*](#) [Grignard reaction](#) [photodynamic therapy \(PDT\)](#)

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