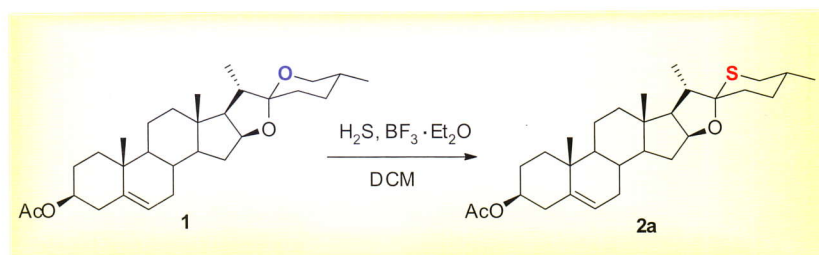


CONTENT

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BF₃·Et₂O Promoted Sulfuration of Steroidal Sapogenins

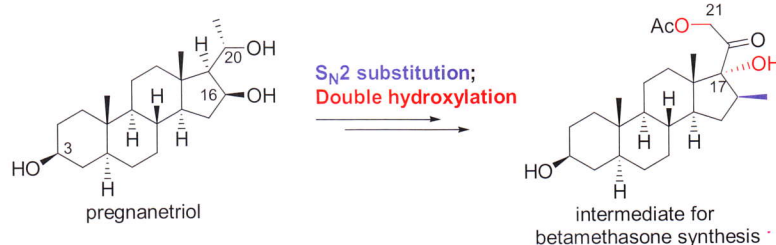


The reaction between steroidal sapogenins and hydrogen sulfide catalyzed by BF₃·Et₂O is described. The thiodiosgenin and thiotigogenin comprising a sulfur atom on the F ring have been synthesized under this mild reaction conditions.

Jun Wang,* Jingjing Wu, Weisheng Tian*

637

A Formal Synthesis of Betamethasone

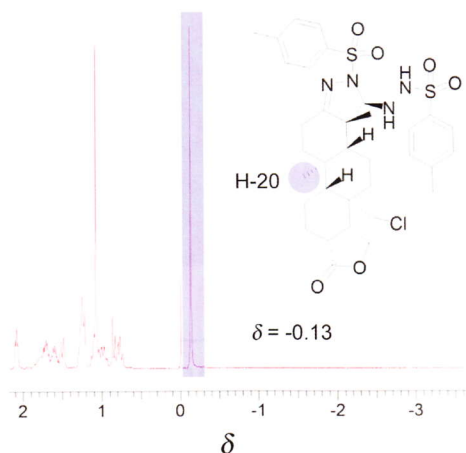


A formal synthesis of betamethasone from pregnane-3 β ,16 β ,20 δ -triol is described. Key transformations are a bromination-acetylation of triol, an *S_N2* reaction of the resulting C16 α -bromide with dimethylcopperlithium to get the required C16 β -methyl group, and a double hydroxylation to prepare the dihydroxyacetone side chain.

Shasha Wang, Yong Shi,* Weisheng Tian*

643

Methyl Group in Isocopalane Derivative Showed an Unusual Negative ¹H NMR Chemical Shift



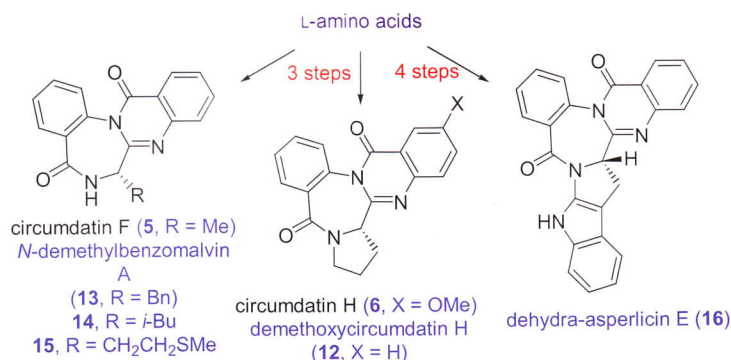
An unusual negative ¹H NMR chemical shift of methyl group in condensation product of isocopalane diterpenoid with *p*-toluenesulfonyl hydrazide was discovered. 2D NMR, computational studies and single-crystal X-ray diffraction analysis were used to determine the real conformation.

Xiong Xiao, Tianqi Chen, Fengfeng Zhang, Jiagao Cheng, Peiying Wu,* Jiangmeng Ren,* Bubing Zeng*

FULL PAPERS

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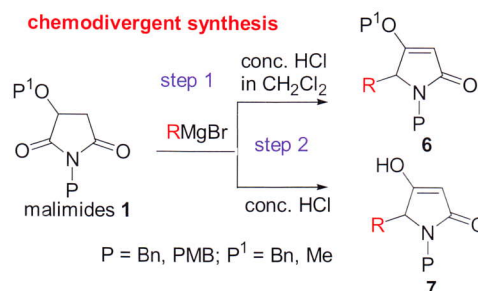
Low-Valent Titanium-Mediated Enantioselective Synthesis of Quinazolinone Alkaloids Circumdatins F, H, and Analogs



Shi-Peng Luo, Hui Geng, Yu Wang, Pei-Qiang Huang*

655

Towards Reaction Control: An Expedient Access to Racemic 5-Substituted Tetramates and 5-Substituted Tetramic Acids from Malimides

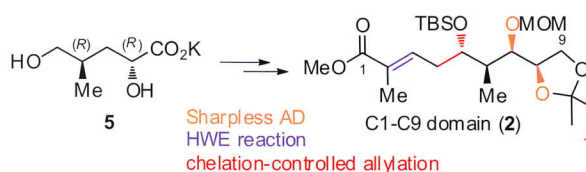


A versatile and divergent two-step transformation of malimides to racemic tetramates and tetramic acids is described. The method consists of Grignard reagent addition with malimides, and concentrated HCl-promoted chemoselective transformations of the latter.

Pei-Qiang Huang,* Wei Ou, Jian-Liang Ye

663

Synthesis of C1–C9 Domain of the Nominal Didemnaketal A

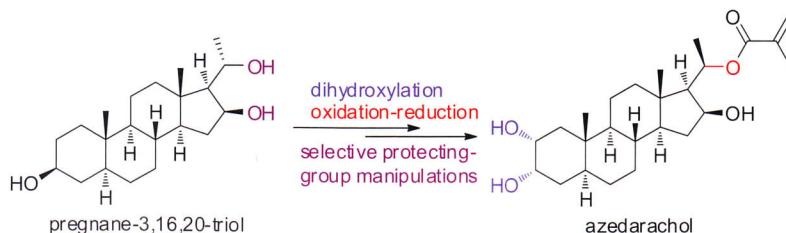


Herein we describe a synthesis of C1–C9 domain **2** of the proposed structure of didemnaketal A, a natural product with important bioactivities, from potassium (2*R*,4*R*)-2,5-dihydroxy-4-methylpentanoate **5**. Sharpless asymmetric dihydroxylation introduced the chiral vicinal diol and chelation-controlled allylation established another chiral OH.

Shunji Zhang, Yong Shi,* Weisheng Tian*

669

Semisynthesis of Azedarachol from Pregnanetriol, a Degradative Product of Tigogenin

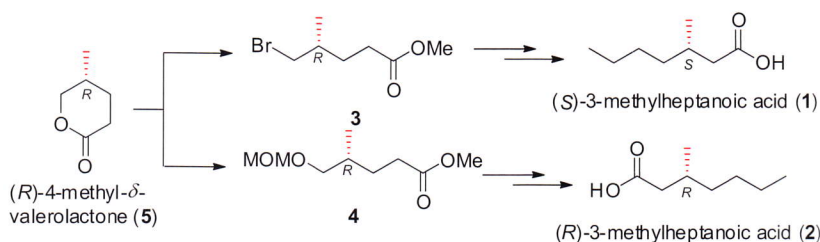


Described herein is a semisynthesis of azedarachol from pregnanetriol, which featured a symbiotic elimination/deprotection process, an oxidation/reduction procedure for reversing C20 configuration, and a dehydration-dihydroxylation process to introduce 2,3-*cis*-diol. This synthesis also discloses some interesting selectivities of 16,20-diol unit.

Dongshan Zhang, Yong Shi,* Weisheng Tian*

674

Syntheses of (*R*)- and (*S*)-3-Methylheptanoic Acids



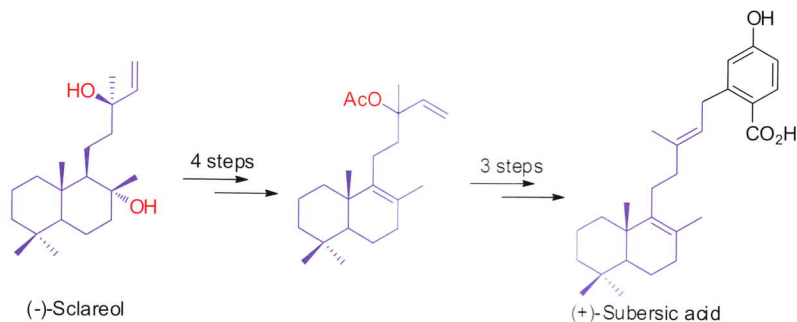
Both enantiomers of 3-methylheptanoic acid have been synthesized from chiral methyl molecules which were derived from (*R*)-4-methyl- δ -valerolactone (**5**). A wide variety of chiral 3-methyl alkanolic acids can also be synthesized by the methods described herein.

Shunji Zhang, Yong Shi,* Weisheng Tian*

CONTENT

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An Efficient Synthesis of (+)-Subersic Acid

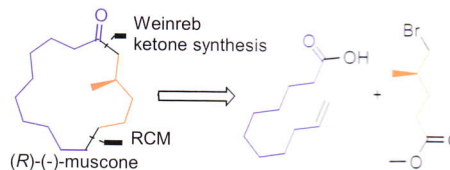


Jing Wang, Peiqiang Wang, Jue Li, Peiying Wu,* Jiangmeng Ren,* Buling Zeng*

A seven-step synthetic route was developed to synthesize (+)-subersic acid from (-)-Sclareol. The cross coupling of the diterpene with the arene fragment using the arylation of allylic acetate followed by β -acetoxy elimination type Heck reaction was acted as the key reaction.

683

Synthesis of (*R*)-(-)-Muscone from (*R*)-5-Bromo-4-methylpentanoate: A Chiron Approach



Junwei Shen, Yong Shi,* Weisheng Tian*

Using methyl (*R*)-5-bromo-4-methylpentanoate, we have accomplished a synthesis of (*R*)-muscone, a natural macrocyclic musk, based on chiral pool strategy.