

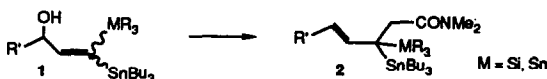
GRAPHICAL ABSTRACTS

*Tetrahedron Lett.* 1990, 31, 5829

A ROUTE TO 1,1-DIORGANOMETALLIC SPECIES VIA THE CLAISEN REARRANGEMENT OF FUNCTIONALIZED  $\gamma$ -HYDROXYVINYLSTANNANES

Mark Lautens,\* Alexandre H. Huboux, Bain Chin and Julia Downer  
Department of Chemistry, University of Toronto, Toronto, Ontario Canada M5S 1A1

A series of  $\gamma$ -hydroxyvinylstannanes, 1, were subjected to Claisen rearrangement to yield allylstannanes, 2, bearing a second metallic species. Approximately 90% chirality transfer was observed when an optically enriched alcohol was used.

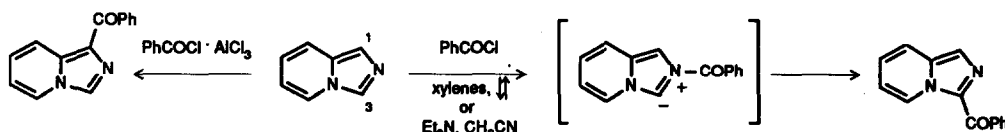


*Tetrahedron Lett.* 1990, 31, 5833

REGIOSPECIFIC ACYLATION REACTIONS OF

IMIDAZO[1,5-a]PYRIDINE Dennis J. Hlasta, Department of Medicinal Chemistry, Sterling Research Group, Rensselaer, New York 12144

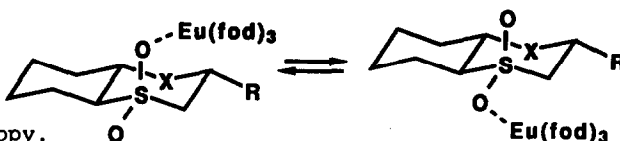
*Imidazo[1,5-a]pyridine displays dual reactivity through two condition-dependent reaction pathways.*



*Tetrahedron Lett.* 1990, 31, 5835

LANTHANIDE INDUCED  $^{17}\text{O}$  NMR SHIFTS OF DIASTEREOTOPIC OXYGEN ATOMS IN 1-THIADECALIN 1,1-DIOXIDE AND RELATED COMPOUNDS. T.A. Powers and S.A. Evans, Jr.\*, Dept. of Chemistry, The University of North Carolina, Chapel Hill, NC 27599-3290 USA

Binding between 1-thiadecalin 1,1-dioxide and related sulfones and the shift reagent  $\text{Eu}(\text{fod})_3$  was studied using  $^{17}\text{O}$  NMR spectroscopy.

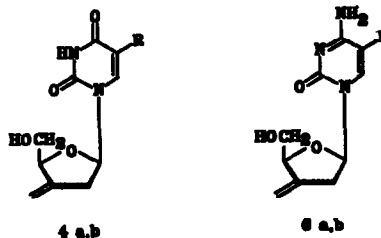


*Tetrahedron Lett.* 1990, 31, 5839

SYNTHESIS OF 2',3'-DIDEOXY-3'-METHYLENE PYRIMIDINE NUCLEOSIDES AS POTENTIAL ANTI-AIDS AGENTS

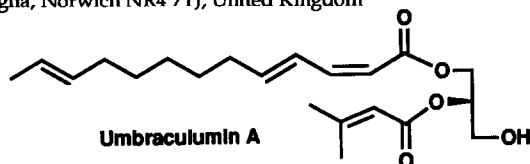
M. Sharma, M. Bobek\*, Grace Cancer Drug Center, Roswell Park Cancer Institute, Buffalo, New York 14263

Efficient synthesis of 2',3'-dideoxy-3'-methylene nucleoside analogs starting from 2'-deoxy-3'-keto-nucleosides is described.



**THE SYNTHESIS AND ABSOLUTE CONFIGURATION OF THE NOVEL ICHTHYOTOXIC DIACYLGLYCEROL, UMBRACULUMIN A**

John M. Herbert, Edna Faria De Medeiros and Richard J.K. Taylor,\* School of Chemical Sciences, University of East Anglia, Norwich NR4 7TJ, United Kingdom

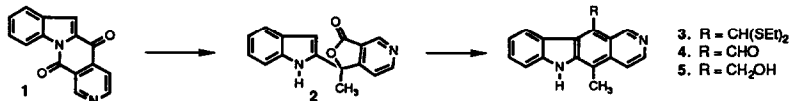


**SYNTHESIS OF 5-METHYL-6H-PYRIDO[4,3-b]CARBAZOLE-11-METHANOL**

Sandeep P. Modi,<sup>1</sup> James J. Carey,<sup>2</sup> and Sydney Archer<sup>1\*</sup>

<sup>1</sup>Chemistry Department, Rensselaer Polytechnic Institute, Troy, NY 12180-3590, USA. <sup>2</sup>Sterling Research Group, Rensselaer, NY 12144, USA.

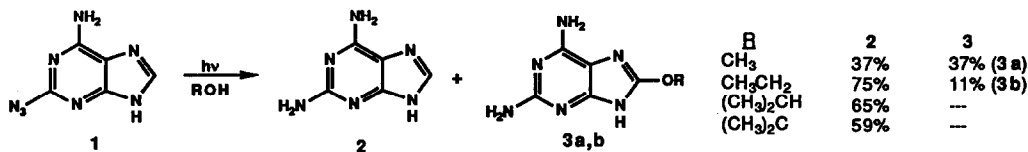
Dione **1** was converted to lactone **2** which by a series of reactions involving intermediates **3** and **4** gave the title compound **5**.



**PHOTOCHEMISTRY OF 2-AZIDOADENINE IN ALCOHOLS**

Yi-de Xing, Stephen S. Hixson, and Robert A. Zimmermann

Departments of Chemistry and Biochemistry, University of Massachusetts, Amherst, MA 01003.

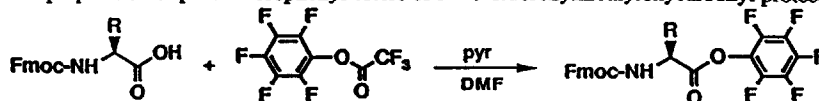


**PREPARATION OF PENTAFLUOROPHENYL ESTERS OF FMOC PROTECTED AMINO ACIDS WITH PENTAFLUOROPHENYL TRIFLUOROACETATE**

Michael Green\* and Judd Berman

Glaxo Research Laboratories, Five Moore Drive, Research Triangle Park, N.C. 27709

A high yield procedure for the preparation of pentafluorophenyl esters of N<sup>α</sup>-9-fluorenylmethoxycarbonyl protected amino acids is described.





**AN UNUSUAL FRAGMENTATION PROCESS DISCOVERED DURING THE COURSE OF CLEAVAGE OF A CAMPHANIC ACID AMIDE**

Chinpiao Chen,<sup>a</sup> Alan P. Kozikowski,<sup>a\*</sup> and Richard G. Ball<sup>b</sup>

<sup>a</sup>Department of Chemistry, 1101 Chevron Science Center, University of Pittsburgh, Pittsburgh, PA 15260;

<sup>b</sup>Merck Sharp & Dohme Research Laboratories, P.O.

Box 2000, Rahway, NJ 07065

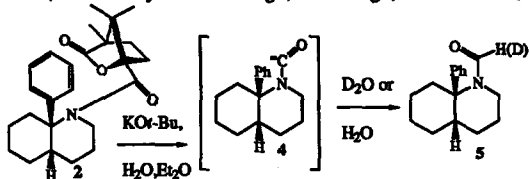
An unusual fragmentation reaction that affords

a carbamoyl anion



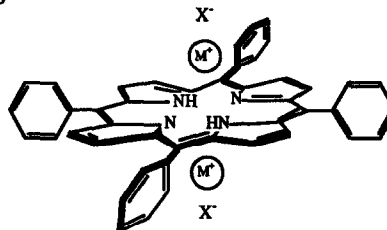
discovered during the course of the

synthesis of rigidified PCP analogues is reported.



**THE FREE BASE OF TETRAPHENYLPORPHINE SERVES AS A HOST FOR ALKALI METAL SALTS**

J. S. Manka and D. S. Lawrence, Department of Chemistry  
State University of New York, Buffalo, NY 14214

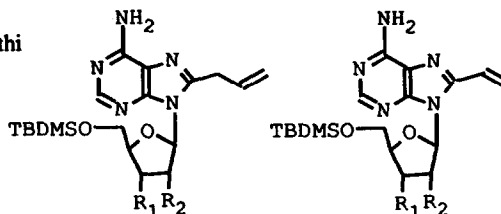


**PALLADIUM CATALYSED C-8 ALLYLATION AND VINYLATION OF ADENOSINE, 2'-DEOXYADENOSINE AND 2',3'-DIDEOXYADENOSINE NUCLEOSIDES**

Robert M. Moriarty\*, W. Ruwan Epa and Alok K. Awasthi

Department of Chemistry,  
University of Illinois at Chicago,  
Chicago, IL 60680.

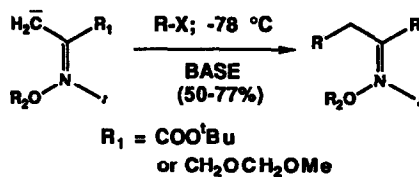
R<sub>1</sub>, R<sub>2</sub> = OTBDMS or  
R<sub>1</sub> = OTBDMS R<sub>2</sub> = H or R<sub>1</sub>, R<sub>2</sub> = H



**ALKYLATION STUDIES OF ANIONS FROM PYRUVATE OXIME ETHERS AND RELATED DERIVATIVES**

D.R. Williams\*, J.W. Benbow  
Department of Chemistry, Indiana University  
Bloomington, Indiana 47405, U.S.A.

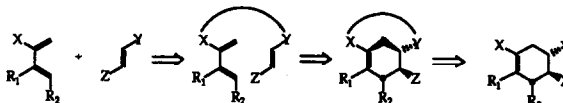
Alkylations of highly reactive monoanions of pyruvate oximino ethers and related derivatives are discussed.



**DISPOSABLE TETHERS IN TYPE 2 INTRAMOLECULAR DIELS-ALDER CYCLOADDITION REACTIONS. APPLICATIONS IN STEREOCHEMICAL CONTROL**

K. J. Shea\*, Kathleen S. Zandi, Andrew J. Staab and R. Carr. Department of Chemistry, University of California, Irvine, California 92717

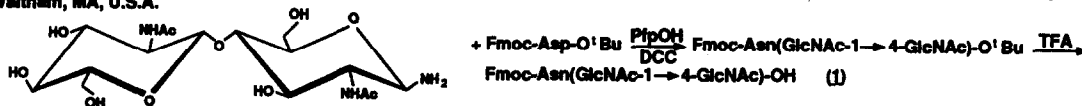
**Summary:** Temporary union of diene and dienophile in the type 2 intramolecular Diels-Alder cycloaddition provides a general strategy for controlling both regio- and stereochemistry of the cycloaddition.



**AUTOMATED SOLID-PHASE SYNTHESIS OF GLYCOPEPTIDES. INCORPORATION OF UNPROTECTED MONO- AND DISACCHARIDE UNITS OF N-GLYCOPROTEIN ANTENNAE INTO T CELL EPITOPIC PEPTIDES**

Laszlo Otvos, Jr.<sup>a</sup>, Laszlo Urge<sup>b</sup>, Miklos Hollo<sup>a</sup>, Krzysztof Wroblewski<sup>c</sup>, Grazyna Graczyk<sup>c</sup>, Gerald D. Fasman<sup>d</sup> and Jan Thurin<sup>a</sup>

<sup>a</sup>The Wistar Institute, Philadelphia, PA 19104, U.S.A.; <sup>b</sup>Dept. of Organic Chemistry, L. Eotvos University, Budapest, Hungary; <sup>c</sup>Dept. of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA, U.S.A.; <sup>d</sup>Dept. of Biochemistry, Brandeis University, Waltham, MA, U.S.A.

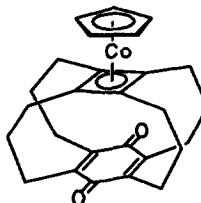


Fmoc-Asn(GlcNAc)-OH and **1** are used for automated solid-phase synthesis of H-Gly-Lys-Ala-Tyr-Thr-Ile-Phe-Asn<sup>n</sup>-Lys-Thr-Leu-Met-NH<sub>2</sub>

**ISOLATION OF A DONOR-ACCEPTOR SUPERPHANE WITH A QUINONE AND A CpCo-CYCLOBUTADIENE UNIT**

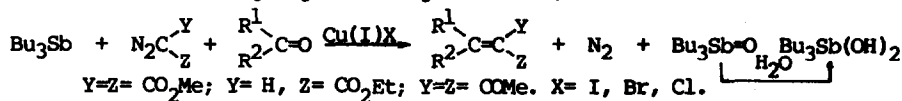
Rolf Gleiter and Detlef Kratz

Organisch-Chemisches Institut  
der Universität Heidelberg,  
Im Neuenheimer Feld 270,  
D-6900 Heidelberg (W. Germany)



**A NOVEL OLEFINATION OF DIAZO-COMPOUNDS WITH CARBONYL COMPOUNDS MEDIATED BY TRIBUTYLSTIBINE AND CATALYTIC AMOUNT OF Cu(I)I**

Yi Liao and Yao-Zeng Huang\*  
Shanghai Institute of Organic Chemistry, Chinese Academy  
of Sciences, 345 Lingling Lu, Shanghai 200032, China

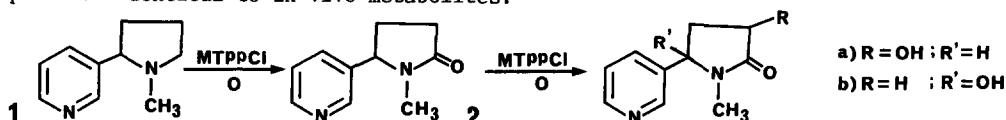


## METABOLIC STUDIES WITH MODEL CYTOCHROME p-450 SYSTEMS

M.A. Chauncey\* and Shin-ichi Ninomiya

Daiichi Pure Chemicals, 2117 Muramatsu, Tokai-mura, Ibaraki-ken 319-11, Japan

Oxidation of nicotine (1) and cotinine (2) using p-450 model catalysts results in products identical to in vivo metabolites.

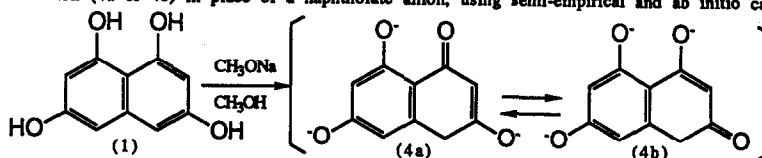


STABLE KETO-TAUTOMER OF TETRAHYDROXYPHTHALENE IN ALKALI:  
THEORETICAL SUPPORT TO THE POST-AROMATIC REDUCTION IN THE BIOSYNTHESIS OF AROMATIC POLYKETIDES

Koji Ichinose, Masamichi Sugimori, Akiko Itai, Yutaka Ebizuka and Ushio Sankawa

Faculty of Pharmaceutical Sciences, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan

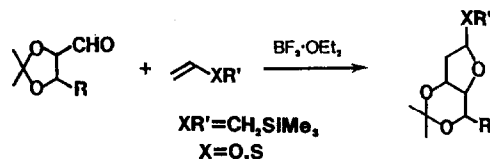
The structure of the most stable ionic species of Tetrahydroxynaphthalene (1) in alkali was clarified as a non-symmetrical keto-tautomer trianion (4a or 4b) in place of a naphtholate anion, using semi-empirical and ab initio calculations.



STRUCTURAL ELUCIDATION OF THE CYCLIC PRODUCTS  
FORMED BY THE REACTION OF 2,3-O-ISOPROPYLIDENE  
DERIVATIVES OF aldehydo-ALDOSE WITH ALLYLSILANES,  
VINYL ETHERS, OR VINYL SULFIDES IN THE PRESENCE OF  
BORON TRIFLUORIDE ETHERATE

Hideyuki Sugimura, The Noguchi Institute, 1-8-1, Kaga, Itabashi-ku, Tokyo 173, Japan

Tetrahydrofuran derivatives were found to be formed by the title reaction.

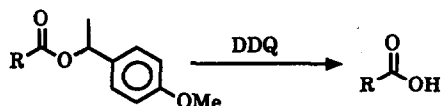
OXIDATIVE DEBENZYLATION OF 4-METHOXY- $\alpha$ -METHYLBENZYL ESTERS

Sung-Eun Yoo\*, Hye Ryung Kim, Kyu Yang Yi

Korea Research Institute of Chemical Technology

P.O.Box 9, Daedeog Danji, Daejeon, Korea

4-Methoxy- $\alpha$ -methylbenzyl alcohol was introduced as a new protecting group for carboxylic acids. The corresponding esters can be cleanly hydrolyzed oxidatively with DDQ at rt. This process is compatible with several reduction sensitive functional groups.



**A STEREOSELECTIVE ROUTE TO TRANS-2,5-DISUBSTITUTED TETRAHYDROFURANS**

Sung Ho Kang\*

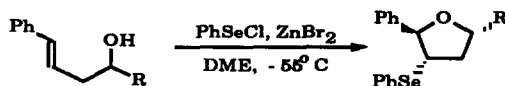
Department of Chemistry, Korea Advanced Institute of Science and Technology, Taejon 305-701, Korea

Tae Seop Hwang,<sup>a</sup> Wan Joo Kim<sup>b</sup> and Joong Ki Lim<sup>a</sup>

<sup>a</sup> College of Pharmacy, Sung Kyun Kwan University, Suwon 440-746, Korea

<sup>b</sup> Korea Research Institute of Chemical Technology, Taejon 305-606, Korea

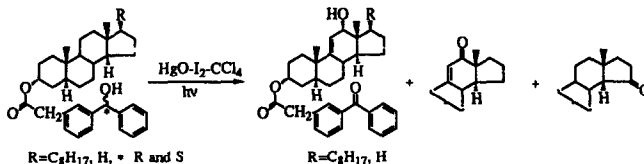
An efficient synthetic route to trans-2,5-disubstituted tetrahydrofurans is described.



**LONG-RANGE INTRAMOLECULAR FUNCTIONALIZATION BY ALKOXYL RADICALS; LONG-RANGE INTRAMOLECULAR DOUBLE FUNCTIONALIZATION OF RING C OF CHOLESTANE AND ANDROSTANE SKELETONS.**

Kazuhiko Orito, Masaru Ohto, Naoto Sugawara, and Hiroshi Suginome\*. Organic Synthesis Division, Faculty of Engineering, Hokkaido University, Sapporo 060, Japan

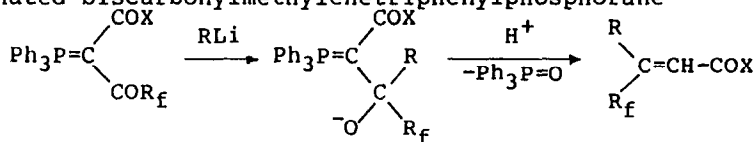
A one-step double introduction of a carbon-carbon double bond and oxygen functions to ring C of 5 $\alpha$ -steroid skeletons is described.



**A NOVEL SYNTHESIS OF PERFLUOROALKYLATED**

**$\alpha,\beta$ -UNSATURATED CARBONYL COMPOUNDS**

Yanchang Shen\* and Tielin Wang  
Shanghai Institute of Organic Chemistry, Academia Sinica, Shanghai, China  
Perfluoroalkylated  $\alpha,\beta$ -unsaturated carbonyl compounds were synthesized from fluorinated biscarbonylmethylenetriphenylphosphorane

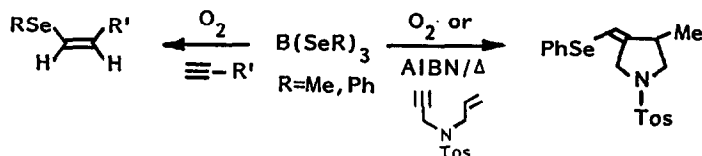


**VINYL RADICAL GENERATION WITH SELENOBORANE AND**

**ITS APPLICATION TO CYCLIZATION REACTION OF ENYNES**

Tadashi Kataoka, Mitsuhiro Yoshimatsu, Hiroshi Shimizu, and Mikio Hori\*

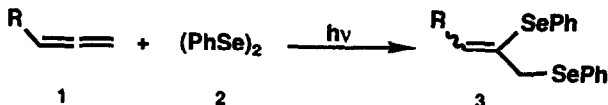
Gifu Pharmaceutical University, 6-1 Mitahora-higashi 5-chome, Gifu 502, Japan



**PHOTO-INITIATED ADDITION OF  
DIPHENYL DISELENIDE TO ALLENES**

Akiya Ogawa,<sup>a</sup> Kazuyuki Yokoyama, Hiroshi Yokoyama,  
Masahito Sekiguchi, Nobuaki Kambe, and Noboru Sonoda  
Department of Applied Chemistry, Faculty of Engineering,  
Osaka University, Suita, Osaka 565, Japan

Free-radical addition of diphenyl diselenide 2  
to allenes 1 took place under irradiation  
through Pyrex with tungsten lamp to provide  
1-(phenylselenomethyl)vinyl selenides 3  
in excellent yields.

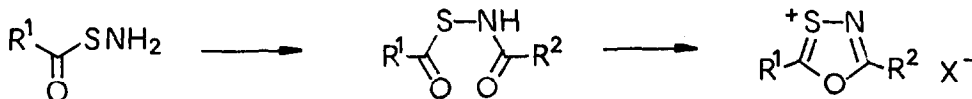


**THE FIRST OXATHIAZOLIUM CATIONS - A SIMPLE  
SYNTHESIS OF 1,3,4-OXATHIAZOLIUM SALTS**

Tommy W.K. Yung and Michael P. Sammes\*

Department of Chemistry, University of Hong Kong, Pokfulam Road, Hong Kong.

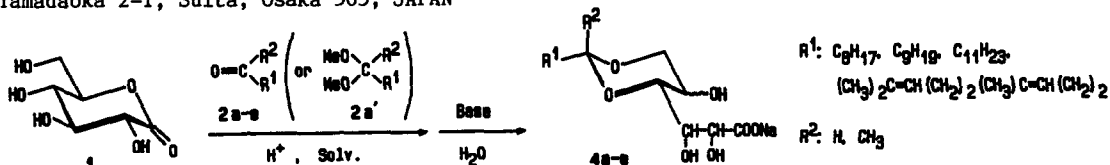
The first preparation of oxathiazolium salts by cyclization of  
S,N-diacylthiohydroxylamines with strong acid.



**PREPARATION OF TRIHYDROXYCARBOXYLATES BEARING A LONG-  
CHAIN ALKYL ACETAL GROUP FROM GLUCONO-1,5-LACTONE**

Toshiyuki Kida, Araki Masuyama, and Mitsuo Okahara\*

Department of Applied Chemistry, Faculty of Engineering, Osaka University  
Yamadaoka 2-1, Suita, Osaka 565, JAPAN

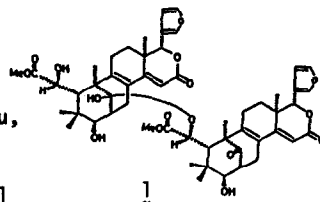


**MAHAGONIN, A NOVEL DIMERIC TETRANORTRITERPENOID FROM  
SWIETENIA MAHAGONI JACQ.**

Shigetoshi Kadota,<sup>a</sup> Kyoko Yanagawa,<sup>a</sup> Tohru Kikuchi,<sup>a</sup> and Ken Tanaka<sup>b</sup>

Research Institute for Wakan-Yaku (Oriental Medicines), Toyama Medical  
and Pharmaceutical University,<sup>a</sup> 2630 Sugitani, Toyama 930-01, Japan and  
National Research Institute of Police Science,<sup>b</sup> 6 Sanban-cho, Chiyoda-ku,  
Tokyo 102, Japan

Mahagonin, a novel dimeric tetranortriterpenoid, has been isolated from  
the seeds of *Swietenia mahagoni* and its structure was determined to be ]  
on the basis of spectroscopic evidence and chemical correlation with 3-O-  
acetylswietenolide.





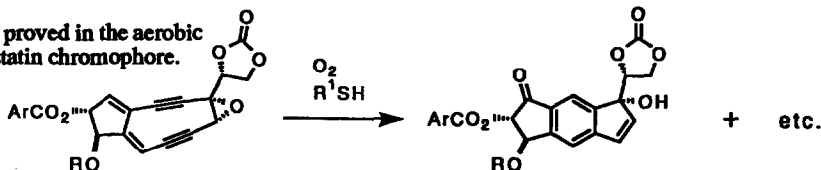
*Tetrahedron Lett.* 1990, 31, 5947

### OXIDATIVE TRIGGERING FOR AROMATIZATION OF THE NEOCARZINOSTATIN CHROMOPHORE

Toshiyuki Tanaka, Kenshu Fujiwara, and Masahiro Hirama\*

Department of Chemistry, Faculty of Science, Tohoku University, Sendai 980, Japan

Formation of ketone has been proved in the aerobic decomposition of neocarzinostatin chromophore.

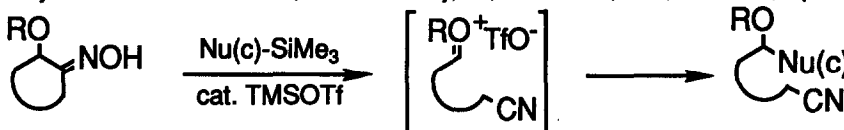


*Tetrahedron Lett.* 1990, 31, 5951

### BECKMANN FRAGMENTATION AND SUCCESSIVE CARBON-CARBON BOND FORMATION OF $\alpha$ -ALKOXYCYCLOALKANONE OXIMES CATALYZED BY TRIMETHYLSILYL TRIFLUOROMETHANESULFONATE

H. Fujoka,\* M. Miyazaki, T. Yamanaka, H. Yamamoto, and Y. Kita\*

Faculty of Pharmaceutical Sciences, Osaka University, 1-6, Yamada-oka, Suita, Osaka 565, Japan



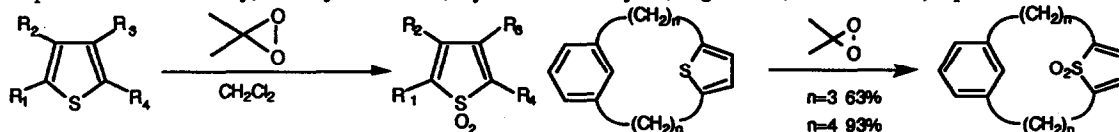
[ Nu(c)-SiMe<sub>3</sub>: allylsilane, silyl cyanide, silyl enol ethers ]

*Tetrahedron Lett.* 1990, 31, 5955

### AN EXTREMELY EFFICIENT SYNTHESIS OF THIOPHENE 1,1-DIOXIDES. OXIDATION OF THIOPHENE DERIVATIVES WITH DIMETHYLDIOXIRANE

Yuji Miyahara\* and Takahiko Inazu

Department of Chemistry, Faculty of Science, Kyushu University 33, Higashi-ku, Fukuoka 812, Japan



*Tetrahedron Lett.* 1990, 31, 5959

### A STEREOSELECTIVE BIOCATALYTIC DIELS-ALDER REACTION

K. Rama Rao\*, T.N. Srinivasan and N. Bhanumathi

Organic Chemistry-I, Indian Institute of Chemical Technology, Hyderabad-500 007, India

Baker's yeast catalyzes highly stereoselective Diels-Alder reaction of cyclopentadiene with various dienophiles.

