JOURNAL OF THE CHEMICAL SOCIETY

Perkin Transactions 1

Organic and Bio-organic Chemistry

CONTENTS

Perkin Communications

| 1881 Cerium(IV) ammonium nitrate mediated | O CO ₂ Me Ph CO ₂ Me 3 (42%) | | |
|---|--|--|--|
| addition of dimethyl malonate to styrene: a remarkable reaction | CO ₂ Me CAN, MeOH Q | | |
| | CO ₂ Me 20 °C Ph 4 (29%) | | |
| Vijay Nair and Jessy Mathew | $X CO_2Me$ $Ph CO_2Me$ $5 X = ONO_2 (6\%)$ $6 X = OMe (5\%)$ | | |

Articles

Pietro Tundo

| 1883 | Design and synthesis of a C_4 -symmetrical hard—soft ditopic metal receptor by calixarene—porphyrin coupling | Bu' Bu' Bu' Bu' KI |
|------|--|--|
| | Takeshi Nagasaki, Hiroyuki Fujishima, Masayuki Takeuchi and Seiji Shinkai | |
| 1889 | Selective mono-benzylation of methylene active compounds with dibenzyl carbonate: benzylation of phenol | $PhCH_{2}X + PhCH_{2}OCOOCH_{2}Ph \xrightarrow{K_{2}CO_{3}, DMF} PhCH(CH_{2}Ph)X + PhCH_{2}OH + CO_{2}$ $X = CN, COOCH_{2}Ph$ |
| | Maurizio Selva, Carlos Alberto Marques, | PhOH + PhCH ₂ OCOOCH ₂ Ph $\frac{K_2CO_3, DMF}{155 °C}$ PhOCH ₂ Ph + PhCH ₂ OH + CO ₂ |

| 1895 | Carotenoids and related polyenes. Part 3. First total synthesis of fucoxanthin and halocynthia-xanthin using oxo-metallic catalyst | HO Pucoxambin OAc | | | |
|------|---|---|--|--|--|
| | Yumiko Yamano, Chisato Tode and Masayoshi Ito | Ho Halocynthiaxanthin | | | |
| 1905 | Synthesis of DL-threo-3-(1-fluoro-1-methylethyl)- and DL-threo-3-(1,1-difluoroethyl)-malic acids. Mechanistic studies of 3-isopropylmalate dehydrogenase | Me H CO ₂ - IPMDH Me CO ₂ - CO ₂ Me CO ₂ - HO H CO ₂ H H | | | |
| | Tetsuya Aoyama, Tadashi Eguchi, Tairo Oshima and Katsumi Kakinuma | (2R,3S)-IPM 2-Uxoisocaproate | | | |
| 1913 | Control over absolute (R,S) , relative $(syn,anti)$ and geometrical (E,Z) stereochemistry in the synthesis of allylically substituted alkenes from diphenylphosphinoyl epoxy alcohols | OH O | | | |
| | Jonathan Clayden, Andrew B. McElroy and Stuart Warren | syn or anti, $+$ or $ E$ or Z , $+$ or $-$ | | | |
| 1935 | Biosynthesis of (+)-cubenene and (+)-epicubenol by cell-free extracts of cultured cells of <i>Heteroscyphus planus</i> and cyclization of [² H]farnesyl diphosphates | H ⁶ | | | |
| | Kensuke Nabeta, Kazuyoshi Kigure, Masaru Fujita, Tomomi Nagoya, Takehiro Ishikawa, Hiroshi Okuyama and Toshihide Takasawa | 1,3- and 1,2-Hydride shifts in biosynthesis of (+)-cubenene | | | |
| 1941 | Radical substitution on a thioester by a methyl radical generated from methyl(L)cobaloxime | CH ₃ (L)cobaloxime + Cl—S-COCH ₃ hv | | | |
| | Masaru Tada, Takao Yoshihara and Kiyohiko Sugano | $L = P(c-hex)_3, PPh_3,$ $PPh_2Bu, PBu_3,$ $N \longrightarrow Y (Y=CN, H, Bu')$ $Cl \longrightarrow S-CH_3$ | | | |
| 1945 | Synthesis of chiral diazanedicarboxylate and diazenedicarboxylate esters: electrophilic amination reactions of achiral ester and amide enolates | $R^{1}O_{2}C-N=N-CO_{2}R^{1}$ $i. R^{2}CHCOX$ $ii. H_{2}O$ $R^{1}O_{2}C^{N}NHCO_{2}R^{1}$ $R^{1}= chiral group$ | | | |
| | Joanna M. Harris, Evon A. Bolessa, Aubrey J. Mendonca, Sheng-Chu Feng and John C. Vederas | e.g. $X = OE1$, NMe_2 , NMe_2 | | | |

1951 Synthesis of macrocyclic diazanedicarboxylate and diazenedicarboxylate esters containing a steroid skeleton: an unusual oxidation of bromide to bromine by a strained diazenedicarboxylate ester. X-Ray molecular structure of 3α-(3-hydroxypropyl)-24-nor-5β-cholan-7α-ol diazane-1,2-dicarboxylate cyclic diester

Joanna M. Harris, Evon A. Bolessa and John C. Vederas

1961 Electro-organic reactions. Part 42. The diastereoselective cathodic hydrodimerisation of cinnamate esters; preparative aspects

Ph CO₂R* Ph' CO₂R*

R* is chiral; i, Hg cathode, DMF-Et₄NBr (or LiClO₄), controlled

potential, 1F; ii, Acidic hydrolysis, $-CO_2$ Chiral esters of (\pm)-2-carboxy-3,4-diphenylcyclopentanone are formed in high yields (70–95%) and in diastereoisomeric excesses depending on R*; for R* = (-)-bornyl a de of >95% is obtained

1971 New synthesis of carboxin and oxycarboxin pesticides: application to the preparation of their new analogues substituted at the C-2 methyl group

Romualdo Caputo, Carla Ferreri, Annalisa Guaragna, Giovanni Palumbo and Silvana Pedatella

A two-step, mild preparation of the 5,6-dihydro-1,4-oxathiine ring system enabled the synthesis from acetoacetanilide of several C-2 methyl substituted carboxin 1 (R=H) and oxycarboxin 2 (R=H) derivatives with potential systemic fungicidal activity

Corrigenda

Majid Motevalli

- 1975 Synthesis of 6-, 7- and 8-carbon sugar analogues of potent anti-influenza 2,3-didehydro-2,3-dideoxy-N-acetylneuraminic acid derivatives Mark J. Bamford, Julia Castro Pichel, Wahid Husman, Bina Patel, Richard Storer and Niall G. Weir
- 1975 Trapping of translocated radicals by tetrathiafulvalene radical cation John A. Murphy and Stephen J. Romme

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Forthcoming Articles in Perkin Transactions 1

Keynote Article: Pyrylium salts in polyene natural product synthesis: organometallic additions to 4-methylpyrylium tetrafluoroborate **R.J.K. Taylor, K. Hemming** and **E.F. de Medeiros**

Synthesis of the calophyllum coumarins. Part 2. C.J. Palmer and J.L. Josephs

'Active' conformation of the inositol monophosphatase substrate, adenosine 2'-phosphate: role of the ribofuranosyl O-atoms in chelating a second Mg^{2+} ion **D. Gani** and **A.G. Cole**

Probes for the position and mechanistic role of the second 'catalytic' magnesium ion in the inositol monophosphatase reaction **D. Gani, A.G. Cole** and **J. Wilkie**

3-Dimensional interactions between inositol monophosphatase and its substrates, inhibitors and metal ion cofactors **D. Gani, A.G. Cole** and **J.Wilkie**

Photocycloaddition-cyclobutane rearrangement to sprio cyclopentanones. Application in a formal synthesis of $(+)-\alpha$ -cedrene S. Ghosh and D. Patra

trans-Fused crown ethers from 2,5-O-methylene-D-mannitol: synthesis X-ray diffraction structure and full NMR spectroscopic data of 1,6-diazido-1,6-dideoxy-2,5-O-methylene-3,4-O-[2,3-bis(ethoxyethoxy)naphthalenediyl]-D-mannitol J.-P.A. Joly, M. Nazhaoui, B.J. Jean-Claude, V. Del Duca, A. Aubry and M. Boubouh

Addition of allyl nucleophiles to TiCl₄-induced N-methyleneamine equivalents. 1,2 Selective synthesis of 1,2,3,4-tetrahydroquinolines and homoallylic anilines **H.-J. Ha, Y.-G. Ann** and **J.-K. Chan**

Synthesis and cycloaddition of 2,4-dihydropyrrolo[3,4-b]indoles P.C. Srinivasan and A. Jeevanandam

Diastereoselectivity and assignment of absolute stereochemistry in the aza-Diels-Alder reaction of a sulfonylimino acetate with 1-methoxy-3-trimethylsilyloxybuta-1,3-diene A. Whiting, A.K. McFarlane and G. Thomas

Novel synthesis of *meso*-tetraarylporphyrins using high-valent transition metals E.F. Llama, A. Gradillas, C. del Campo and J.V. Sinisterra

Synthesis and sweet tast of optically active (-)-haematoxylin and of some (+)-haematoxylin derivatives L. Merlini, A, Arnoldi, A. Bassoli and G. Borgonovo

Synthesis and properties of bismethano-bridged tetradehydro[21]- [23]- and -[25]annulenones J. Ojima, N. Hiraiwa, S. Kondo, K. Asano, C. Sakon, H. Higuchi, K. Inoue and G. Yamamoto

Reactivity of the carbonyl group in water. Generation of azomethine ylides from aqueous formaldehyde. Michael addition versus dipolar trapping A. Lubineau, G. Bouchain and Y. Queneau

Synthesis of some trichloromethyl-azines and -diazines

B.J. Wakefield, D. Cartwright, J.R. Ferguson, T. Giannopoulos and G. Varvounis

Synthesis of photoresponsive crown ethers having a phosphoric acid functional group as anionic cap and their selective complexing abilities toward alkali metal cations

S. Akabori, Y. Miura, N. Yotsumoto, K. Uchida, M. Kitano and Y. Habata

Antitumour imidazotetrazines. Part 33. New synthesis of the antitumour drug temozolomide using 'masked' methyl isocyanates M.F.G. Stevens, Y. Wang, W.T. Thomson and B.P. Shutts

Benzazepine formation by the 1.7 electrocyclisation reactions of diene conjugated nitrile ylides: studies on relative rates of cyclisation *via* intramolecular competition reactions. **J.T. Sharp** and **K.E. Cullen**

Synthesis of 4-hydroxylamino-1-azabuta-1,3-dienes and their cyclization to 2-substituted pyrazole 1-oxides M. Begtrup, J. Alcazar, I. Almena and A. de la Hoz

Bis(hydroxyphenyloxazolinato)-titanium (IV) and -zirconium (IV) triflates as novel transition metal based Lewis acids C. Floriani and P.G. Cozzi

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