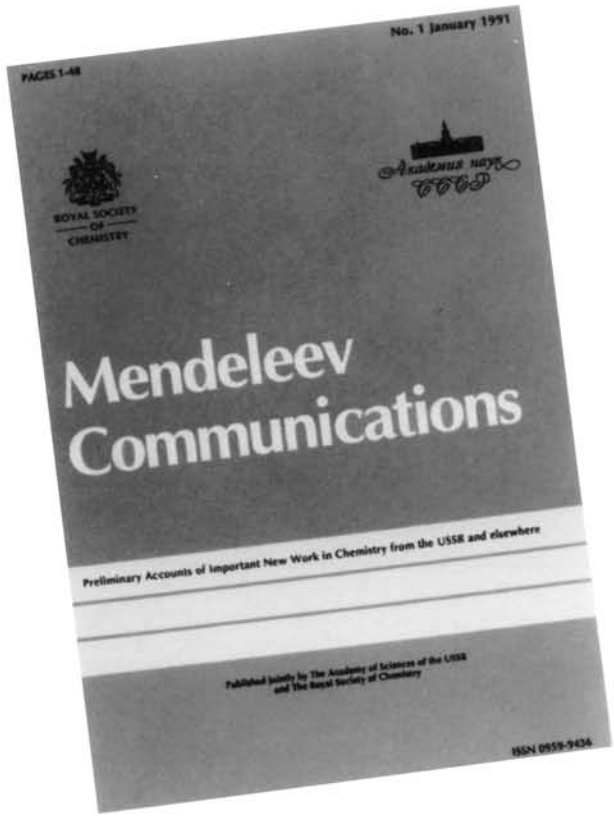
NEW JOURNAL

MENDELEEV COMMUNICATIONS

Preliminary Accounts of Important New Work in Chemistry from the USSR and Elsewhere



- A prestigious new journal to be launched in January 1991
- The result of a collaborative venture between The Academy of Sciences of the USSR and The Royal Society of Chemistry
- Similar in scope and content to its highly successful 'sister' publication – Chemical Communications
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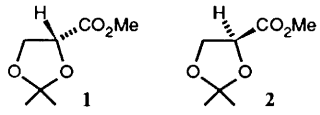
Information Services

Chiral Building Blocks

Aldrich lists a variety of building blocks for asymmetric synthesis. Listed on this page are just a few of the many useful products in this category. Please consult the 1990-1991 Aldrich Catalog/Handbook for additional chiral molecules.



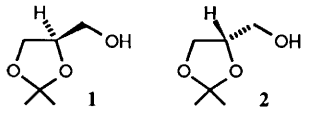
1 2

Optically active precursors for *O*-protected α-hydroxy ketones.[1] Chiral synthons for the preparation of terpenes.[2]

(1) Dumont, R.; Pfander, H. *Helv. Chim. Acta* **1983**, *66*, 814. (2) Larcheveque, M.; Petit, Y. *Synthesis* **1986**, 60.

34,548-2 **Methyl (*R*)-(+)-2,2-dimethyl-1,3-dioxolane-4-carboxylate,** 98% **(1)** **1g $14.00; 5g $44.20**

25,460-6 **Methyl (*S*)-(-)-2,2-dimethyl-1,3-dioxolane-4-carboxylate,** 98% **(2)** **1g $11.60; 5g $39.10**



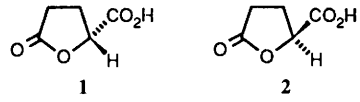
1 2

Important starting materials for the synthesis of chiral phospholipids.

Rosario-Jansen, T.; Jiang, R.-T.; Tsai, M.-D. *Biochemistry* **1988**, *27*, 4619.

24,180-6 **(*R*)-(-)-2,2-Dimethyl-1,3-dioxolane-4-methanol,** 98% **(1)** **250mg $12.00 1g $32.50**

23,774-4 **(*S*)-(+)-2,2-Dimethyl-1,3-dioxolane-4-methanol,** 98% **(2)** **1g $12.60**



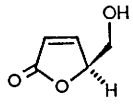
1 2

Useful precursors for many chiral synthons.[1] The (*S*)-isomer was used as a chiral template in the synthesis of (-)-steganone.[2]

(1) Ravid, U.; Silverstein, R.M.; Smith, L.R. *Tetrahedron Lett.* **1980**, *21*, 2709. (2) Larchevegue, M.; Petit, Y. *Synthesis* **1986**, 60.

31,047-6 **(*R*)-(-)-5-Oxo-2-tetrahydrofurancarboxylic acid,** 98% **(1)** **1g $12.50 5g $40.40**

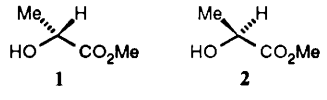
30,146-9 **(*S*)-(+)-5-Oxo-2-tetrahydrofurancarboxylic acid,** 98% **(2)** **1g $14.00 5g $45.50**



Key intermediate for the efficient total synthesis of the potent antiviral agent, 3'-azido-3-deoxythymidine (AZT).[1] Also used as the starting material in Hanessian's replicating lactone strategy for acyclic stereocontrol.[2]

(1) Chu, C.K.; Beach, J.W.; Ullas, G.V.; Kosugi,Y. *Tetrahedron Lett.* **1988**, *29*, 5349. (2) Hanessian, S. *Aldrichim. Acta* **1989**, *22*, 3.

34,686-1 **(*S*)-(-)-5-(Hydroxymethyl)-2(5*H*)-furanone,** 98% **250mg $16.20 1g $45.30**



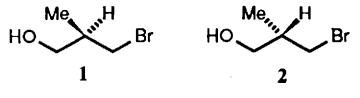
1 2

For the preparation of α-amino esters of high optical purity via displacement of their derived triflates.[1] The (*S*)-isomer was recently used in the first total synthesis of the redox coenzyme Factor 420 (F_{420}).[2]

(1) Feenstra, R.W.; Stokkingreef, E.H.M.; Nivard, R.J.F.; Ottenheijm, H.C.J. *Tetrahedron* **1988**, *44*, 5583.(2) Tanaka, K.; Kimachi, T.; Kawase, M.; Yoneda, F. *J. Chem. Soc., Chem. Commun.* **1988**, 524.

27,776-2 **Methyl (*R*)-(+)-lactate,** 98% **(1)** **1g $10.50; 5g $30.30**

23,034-0 **Methyl (*S*)-(-)-lactate,** 98% **(2)** **5g $10.70; 100g $28.80**



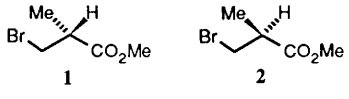
1 2

Reaction with triphenylphosphine produces interesting optically active α-hydroxyphosphonium salts from which the corresponding ylids can be generated.

Kozikowski, A.P.; Chen, Y.-Y.; Wang, B.C.; Xu, Z.-B. *Tetrahedron* **1984**, *40*, 2345.

32,506-6 **(*R*)-(-)-3-Bromo-2-methyl-1-propanol,** 97% **(1)** **1g $11.90; 5g $37.70**

32,505-8 **(*S*)-(+)-3-Bromo-2-methyl-1-propanol,** 99% **(2)** **1g $11.10; 5g $33.10**



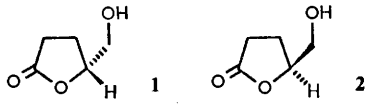
1 2

Precursors for optically active zinc homoenolates which react with electrophiles to yield chiral methyl esters.

Nakamura, E.; Sekiya, K.; Kuwajima, I. *Tetrahedron Lett.* **1987**, *28*, 337.

32,509-0 **Methyl (*R*)-(+)-3-bromo-2-methylpropionate,** 97% **(1)** **1g $10.75 5g $35.70**

32,492-2 **Methyl (*S*)-(-)-3-bromo-2-methylpropionate,** 97% **(2)** **1g $9.20 5g $30.70**



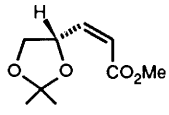
1 2

Chiral starting materials for enantioselective synthesis, for example, (+)-umbelactone and (*S*)-(+)-angelicalactone.[1,2]

(1) Ortuno, R.M.; Alonso, D. ; Cardellach, J.; Font, J. *Tetrahedron* **1987**, *43*, 2191. (2) Ortuno, R.M.; Bigorna, J.; Font, J. *ibid.* **1987**, *43*, 2199.

34,354-4 **(*R*)-(-)-Dihydro-5-(hydroxymethyl)-2(3*H*)-furanone,** 97% **(1)** **250mg $16.20; 1g $54.00**

34,890-2 **(*S*)-(+)-Dihydro-5-(hydroxymethyl)-2(3*H*)-furanone,** 98% **(2)** **250mg $16.20; 1g $ 54.00**



Valuable intermediate in stereocontrolled syntheses of *d*-pentitols.

Minami, N.; Ko, S.S.; Kishi, Y. *J. Am. Chem. Soc.* **1982**, *104*, 1109.

34,769-8 **Methyl (*S*)-(+)-3-(2,2-dimethyl-1,3-dioxolan-4-yl)-*cis*-2-propenoate** **1g $20.50 5g $68.00**