Top 5 Most Cited Papers:

Palladium(0)-Catalyzed Cross-Coupling Reaction of Alkoxydiboron with Haloarenes: A Direct Procedure for Arylboronic Esters
Ishiyama, Tatsuo; Murata, Miki; Miyaura, Norio J. Org. Chem. 1995, 58, 904–912
902 citations

Preparation and Characterization of Fulleroid and Methanofullerene Derivatives:
Hummelen, Jan C.; Knight, Brian W.; LePeq, F.; Wudl, Fred; Yao, Jie; Wilkins, Charles L. J. Org. Chem. 1995, 60, 532-538
793 citations

Novel Alkaloids from the Sponge Batzella sp.: Inhibitors of HIV gp120-Human CD4 Binding
534 citations

Conversion of Arylboronic Acids into Potassium Aryltrifluoroborates: Convenient Precursors of Arylboron Diffuoride Lewis Acids
342 citations

Phosphine-Catalyzed Cycloaddition of 2,3-Butadienoates or 2-Butynoates with Electron-Deficient Olefins. A Novel [3 + 2] Annulation Approach to Cyclopentenes
Zhang, Chunming; Lu, Xiyan J. Org. Chem. 1995, 60, 2906-2908
340 citations

Fun facts from 1995
- world population: 5,674,380,000
- record for longest time in space is set, twice (366 days; 488 days)
- oklahoma city bombing
- man says "Oklahoma was a good idea" then drives tank through Claremont neighborhood.
- internet becomes available to public (eBay founded, Windows 95 released)
- DVD concept released

Top Songs:
Gangsta's Paradise - Coolio
Waterfalls - TLC
This Is How We Do It - Montell Jordan
Only Wanna Be with You - Hootie & the Blowfish
Asymmetric Ring Closure Reactions Mediated by a Chiral $C_2$ Symmetrical Organoselenium Reagent

Robert Deziel* and Eric Malenfant

\[ \text{JOC, 1995, 60, 4660-4662} \]

(2,4,6-Triisopropylphenyl)selenium Bromide (TIPPS-Se-Br). An in Situ-Generated Reagent for Effecting Highly Selective Ring Closures of Homallylic Alcohols to Substituted Tetrahydrofurans

Bruce H. Lipshutz* and Timothy Gross

\[ \text{JOC, 1995, 60, 3572-3573} \]

Synthesis of Aromatic Heterocycles via Palladium-Catalyzed Annulation of Internal Alkynes

Richard C. Larock,* Eul K. Yum, Mark J. Doty, and Kelvin K. C. Sham

\[ \text{JOC, 1995, 60, 3270-3271} \]

A New Version of the Peterson Olefination

Moncef Bellassoued and Nicolas Ozanne

\[ \text{JOC, 1995, 60, 658-6584} \]

"a new simplified version of the Peterson olefination"

Avoids the use of strong organolithium reagents
An Inexpensive Air-Stable Titanium-Based System for the Conversion of Esters to Primary Alcohols
Matthew T. Reding and Stephen L. Buchwald
*JOC, 1995, 60, 7884-7890

Non-Toxic
Non-Pyrophoric

Tolterant Functional Groups

Advantages:
- No need for organic solvent
- No need for anyhydrous/inert atm.
- Inexpensive reagents,
  (byproduct of silicone production)

A Mild, Regioselective Ketal Claisen Rearrangement Promoted by Triisobutylaluminum
Scott D. Rychnovsky* and Jennifer L. Lee
*JOC, 1995, 60, 4318-4318

Total Synthesis of (-)-Thiangazole and Structurally Related Polyazoles
Peter Wipf* and Srikanth Venkatraman
*JOC, 1995, 60, 7224-7229

Disadvantageous acid resulted in isomerization,
lowering yield and product ratios

Daub, W. G.; JOC, 1983, 48, 3876

Related stability of Tosyl, but can be easily removed with F-
A new, Titanium-Mediated Approach to Pyrroles: First Synthesis of Lukianol A and Lamellarin O Dimethyl Ether
Alois Furstner,* Holger Weintritt, and Achim Hupperts
*JOC, 1995, 60, 6637-6641

Diastereoselective Cyclopropanation of Chiral Allylic Alcohols: A More Efficient Reagent for the Relative Sterecontrol
Andre B. Charette* and Helene Lebel
*JOC, 1995, 60, 2966-2967

Improved Procedure for the Synthesis of EnantiomERICALLY Enriched Cyclopropylmethanol Derivatives
Andre B. Charette,* Sylvie Prescott, and Christian Brochu
*JOC, 1995, 60, 1081-1083

Diastereoselectivity in the Cyclopropanation of 3,3-Bimetallic Allylic Alcohols. Preparation of Diastereomeric Cyclopropyl Carbinols via a Simple Oxidation-Reduction Sequence
Mark Lautens* and Patrick H. M. Delanghe
*JOC, 1995, 60, 2474-2487
**JOC Year in Review: 1995**

**Selective, Electrophilic Fluorinations Using N-Fluoro-o-benzenedisulfonimide**
Franklin A. Davis,* Wei Han, and Christopher K. Murphy
*JOC, 1995, 60, 4730-4737

"The reaction mixtures were exceptionally clean; disulfonimide byproduct is highly water soluble. By contrast, fluorinations using NFSi require an alkaline wash to remove the dibenzenesulfonimide byproduct.

**Initial Report and Preparation:**

**NFOBS**

- Low boiling liquid
- 6 step synthesis
- Liquid F₂
- Special reactor

**Asymmetric Synthesis of the Volatile Anesthetic 1,2,2,2-Tetrafluoroethyl Chlorofluoromethyl Ether Using a Stereospecific Decarboxylation of Unusual Stereochemical Outcomet**
Leonid A. Rozov, Patrice W. Rafalko, Suzanne M. Evans, Linda Brockunier, and Keith Ramig*
*JOC, 1995, 60, 1319-1325

**Highly Enantiocontrolled Strategy for the Synthesis of Benzylic Quaternary Carbon Centers. A Formal Total Synthesis of (-)-Mesembrine**
Hideo Nemoto, Tetsuro Tanabe, and Keiichiro Fukumoto*
*JOC, 1995, 60, 6785-6790

**Sodium Diethylalkynylaluminate, A New Chemoselective Alkynylating Agent**
Jin Hee Ahn, Meyoung Ju Joung, and Nung Min Yoon*
*JOC, 1995, 60, 6173-6175

**Chemoselective Alkynylating Agent**

- Electrophilic fluorinations
- NFSi
- Benzenesulfonimide

**Using (+)-DIPT, t-BuOONH₂, and Ti(OiPr)₄**

- DCM, -40 °C
- 65% yield (92% ee)

**3 steps Formal Synthesis**

- (+)-mesembrine

**Asymmetric Synthesis of the Volatile Anesthetic**

- 1,2,2,2-Tetrafluoroethyl Chlorofluoromethyl Ether
- Using a Stereospecific Decarboxylation
- Unusual Stereochemical Outcomet

- **Resolve**
  - MeO⁻SF⁻CO₂H
  - 99% ee

- **KOH, TEG**
  - MeO⁻SF⁻CO₂H
  - DMPU, 200 °C
  - 70-80% yield

- **Acyclic decarboxylation with inversion**
  - MeO⁻SF⁻CO₂H
  - 97% ee
Total Synthesis of (+)-Dactylol via a Novel [3 + 5] Annulation Approach
Gary A. Molander* and Paul R. Eastwood
*JOC, 1995, 60, 4559-4565

"It was unclear what had become of the cis isomer"

Rapid entry to carbocyclic framework, remaining challenge is freeing 8-membered ring via reductive ether cleavage

Half the yield of the model system

(+)-Dactylol, 7-steps from known advanced intermediate

Novel Total Synthesis of (+)-Eremantholide A
Ken-ichi Takao, Hiroshi Ochiai, Ken-ichi Yoshida, Takahiko Hashizuka, Hirokazu Koshimura, Kin-ichi Tadano,* and Seiichiro Ogawa
*JOC, 1995, 60, 8179-8193

Both diol isomers result in same product

(+)-Eremantholide A
Isolated Natural Products

- ritterazine B/C
- pteroenone
- Irbacholine
- Stylopeptide 1
- Paxinorol
- Oteromycin
- Pteroenone
- Nostocyclamide
- Pseudodistomin C
- Suberitenone A
- Malokinenone
- Chloropuupehenol
- Epitaondiol
- Subglutinols A and B

"The First Polycyclic Meroditerpenoid Containing Two Fused Six-Membered Rings Forced into the Twist-Boat Conformation"

Not Included Isolations:
- Microcystin - heptapeptide
- Petriellin A - depsipeptide

Baran Group Meeting
10/14/16
Selected Syntheses of Natural Products and Drugs

presqualene diphosphate - Poulter, D. C. (941)

(–)-lipistatin - Kocienski, P. J. (7334)
nitramine - Koomen, G. J.

(-)-O-methyl-ancistrocladine - Rizzacasa, M. A. (5702)

(+)-neocryptotanshinone, - Jacobi, P. A. (377)

(–)-deoxypodophyllotoxin - Charlton, J. L. (588)

(+)-eremantholide A - Tadano, K. (8179)

(+)-neocryptotanshinone, - Danheiser, R. L. (8341)

(–)-Thiangazole - Wipf, P. (7224)

(–)-mevalonic acid - Myers, A. I. (6511)

rac-kallolide B - Marshall, J. A. (796)

rac-mediterraneol B - Kakiuchi, K. (3318)

Structure Revision

(-)-O-methyl-ancistrocladine - Rizzacasa, M. A. (5702)

(+)-laurene - Myers, A. I. (6511)

rac-kallolide B - Marshall, J. A. (796)

(-)-mevalonic acid - Myers, A. I. (6511)

rac-kallolide B - Marshall, J. A. (796)

(-)-mevalonic acid - Myers, A. I. (6511)

(–)-orientalin - Carrano, C. A. (1561)

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(–)-orientalin - Carrano, C. A. (1561)

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