Statistics:
Volume 58
1540 papers
7957 pages

Publication record:
Wipf, P. (9)
Paquette, L. A. (9)
Padwa, A (8)
Olah, G. A. (8)
Marshall J. A. (8)

Ig Nobels 1993

Chemistry: James Campbell and Gaines Campbell of Lookout Mountain, Tennessee, dedicated deliverers of fragrance, for inventing scent strips, the odious method by which perfume is applied to magazine pages.

Mathematics: Robert Faid of Greenville, South Carolina, farsighted and faithful seer of statistics, for calculating the exact odds (710,609,175,188,282,000 to 1) that Mikhail Gorbachev is the Antichrist.

Notable Events of 1993
Cost of a gallon of gas ~$1.16
Buckingham Palace opens doors to public
Pentium microprocessor introduced by Intel
World Wide Web was born at CERN
X-Files debuts
Michael Jordan retires for the first time
15 June 1993 - Formula One world champion James Hunt dies (45)
Shane Warne bowls "Ball of the Century" to Mike Gatting in the first Test at Old Trafford
EU Farmers protest the reduction in agricultural subsidies due to Maastricht Treaty

Top Movies:
Jurassic Park
Mrs. Doubtfire
Schindler's List
Cool Runnings

Top Songs:
I Will Always Love You by Whitney Houston
Whoomp! (There It Is) by Tag Team
Can't Help Falling In Love by UB40

Top 5 Most Cited Papers:

Design, Synthesis, and Control of Conducting Polymer Architectures–Structurally Homogenous Poly(3–Alkylthiophenes)
757 citations

An Improved Procedure for the Preparation of the Dess–Martin Periodinane
641 citations

New Nitric Oxide–Releasing Zwitterions derived from Polyamines
476 citations

A Convenient Reduction of Amino–Acids and their Derivatives
407 citations

Analysis of 2 C–13 NMR Correlations for Determining the Stereochemistry of 1,3–Diol Acetonides
358 citations
In the absence of TsOH, difficult to obtain reproducible results for acetylation
JOC Year In Review: 1993

Sheu; JOC, 1993, 58, 5784–5787

Rohan Merchant

Baran Group Meeting
04/18/2015

Wang; JOC, 1993, 58, 1651–1652

Yuehchukene

Proudfoot; JOC, 1993, 58, 6996–7000

Davis; JOC, 1993, 58, 1751–1753

**Conditions**

<table>
<thead>
<tr>
<th>Conditions</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>LiHMDS/THF, –10 °C, 2h</td>
<td>17%</td>
<td>76%</td>
</tr>
<tr>
<td>KOTBu/THF, rt, 5 min</td>
<td>54%</td>
<td>22%</td>
</tr>
</tbody>
</table>
Rohan Merchant

JOC Year In Review: 1993

Kuehne; JOC, 1993, 58, 7482–7489.
Kuehne; JOC, 1993, 58, 7490–7497

Practical Alternative to Mitsunobu Conditions for activated alcohols to azides

Grabowski; JOC, 1993, 58, 5886–5888

Kuehne; JOC, 1993, 58, 7482–7489.

Kuehne; JOC, 1993, 58, 7490–7497

Practical Alternative to Mitsunobu Conditions for activated alcohols to azides

Rawal; JOC, 1993, 58, 5583–5584

Kuehne; JOC, 1993, 58, 7490–7497

Practical Alternative to Mitsunobu Conditions for activated alcohols to azides

Grabowski; JOC, 1993, 58, 5886–5888

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Kuehne; JOC, 1993, 58, 7490–7497

Practical Alternative to Mitsunobu Conditions for activated alcohols to azides
Rohan Merchant

Weinreb; JOC, 1993, 58, 4945-4951

THPO \[\rightarrow\] BnN\(^+\)N\(_2\)N\(_2\)THP

\[
\text{FeCl}_3, \text{CH}_2\text{Cl}_2, -78 \text{ C to } rt \rightarrow 61\%
\]

Price; JOC, 1993, 58, 3589–3590

\[
\text{Al(Me)}_3 (3 \text{ eq.}) + \text{CH}_3\text{I} (2 \text{ eq.}, \text{CH}_2\text{Cl}_2, rt) \rightarrow 71\%
\]

complementary to the usual Simmons–Smith cyclopropanation

Yamamoto; JOC, 1985, 50, 4412–4414

Org. React. 2001, 58, 9

A: \(\text{Et}_2\text{Zn}, \text{CH}_2\text{I}_2, \text{Et}_2\text{O}, \text{rt}\)
B: \(\text{iBu}_3\text{Al}, \text{CH}_2\text{I}_2, \text{CH}_2\text{Cl}_2, \text{rt}\)
C: \(\text{Sm/Hg}, \text{CH}_2\text{I}_2, \text{THF}, -78 \text{ C to rt}\)

\[
\begin{array}{|c|c|c|}
\hline
\text{R} & \text{A} & \text{B} \\
\hline
\text{H} & 74 & 1 \\
\text{Bn} & 97 & 67 \\
\hline
\end{array}
\]

\[
\begin{array}{|c|c|c|}
\hline
\text{A} & \text{B} & \text{C} \\
\hline
\text{H} & 76 & 0 \\
\text{Bn} & 1 & 0 \\
\text{H} & 3 & 0 \\
\text{Bn} & <1 & 0 \\
\hline
\end{array}
\]

Bosch; JOC, 1993, 58, 7756–7767

\[
\text{LDA, THF, } -70 \text{ C} \rightarrow 33\%
\]

1. Lawesson's reagent
2. \(\text{NiCl}_2, \text{NaBH}_4, \text{MeOH}\)
(30 % 2 steps)

\(\text{MeO}_2\text{C}\) \(\text{MeO}_2\text{C}\)

\(\text{MeO}_2\text{C}\) \(\text{MeO}_2\text{C}\)

(+)-2,7-Dihydropleiocarpamine

Back; JOC, 1993, 58, 2407–2413

\[
\text{NiCl}_2, \text{NaBH}_4, \text{ROH} \rightarrow \text{Ni}_2\text{B} + \text{H}_2
\]

\[
\text{RR'} \rightarrow \text{RH} + \text{R'H}
\]

mild desulfurization conditions

Stereoretentive!
Overman; JOC, 1993, 58, 2468–2477

Chen; JOC, 1993, 58, 4520–4521

Reider; JOC, 1993, 58, 3731–3735

Chen; JOC, 1993, 58, 2927–2928

Padwa; JOC, 1993, 58, 2061–2067

**Prins cyclisation – Pinacol rearrangement**

Weinreb's procedure provided the methyl ketone in 71\% yield, along with several impurities (0.5-1\%) which were not easily removed without a yield penalty.

The new reagent provides clean product with complete suppression of impurities.

**analogous to Curtius rearrangement**

Possible method to get around alkylation selectivities for pyrazoles?
Albizati; JOC, 1993, 58, 291–293

Oxidative rearrangement

Paquette; JOC, 1993, 58, 4245-4253

intramolecular oxidative coupling

Olah; JOC, 1993, 58, 3194–3195

“very reactive superelectrophile”

Weinreb; JOC, 1993, 58, 4745

Presence of basic nitrogen does not interfere with the reaction.

Mildly acidic conditions – protection of basic nitrogen as ammonium salt

Altamura; JOC, 1993, 58, 272–274

applied to other allylic and benzylic systems
Some useful modifications

Simpkins; JOC, 1993, 58, 533–534

1. Additive, THF
2. PhCHO


Trost; JOC, 1993, 58, 1579–1581

i. KH, THF
ii. 2, tolouene, CuSO₄, 110 °C

Yamamoto; JOC, 1993, 58, 3791–3793

AcCl (1.2 eq.),
Base (2.0 eq.)
CH₂Cl₂, –78 °C

Roskamp; JOC, 1993, 58, 4142–4143

SnCl₂•2H₂O

FYI!

Extends to other acyl chlorides and silyl chlorides as well