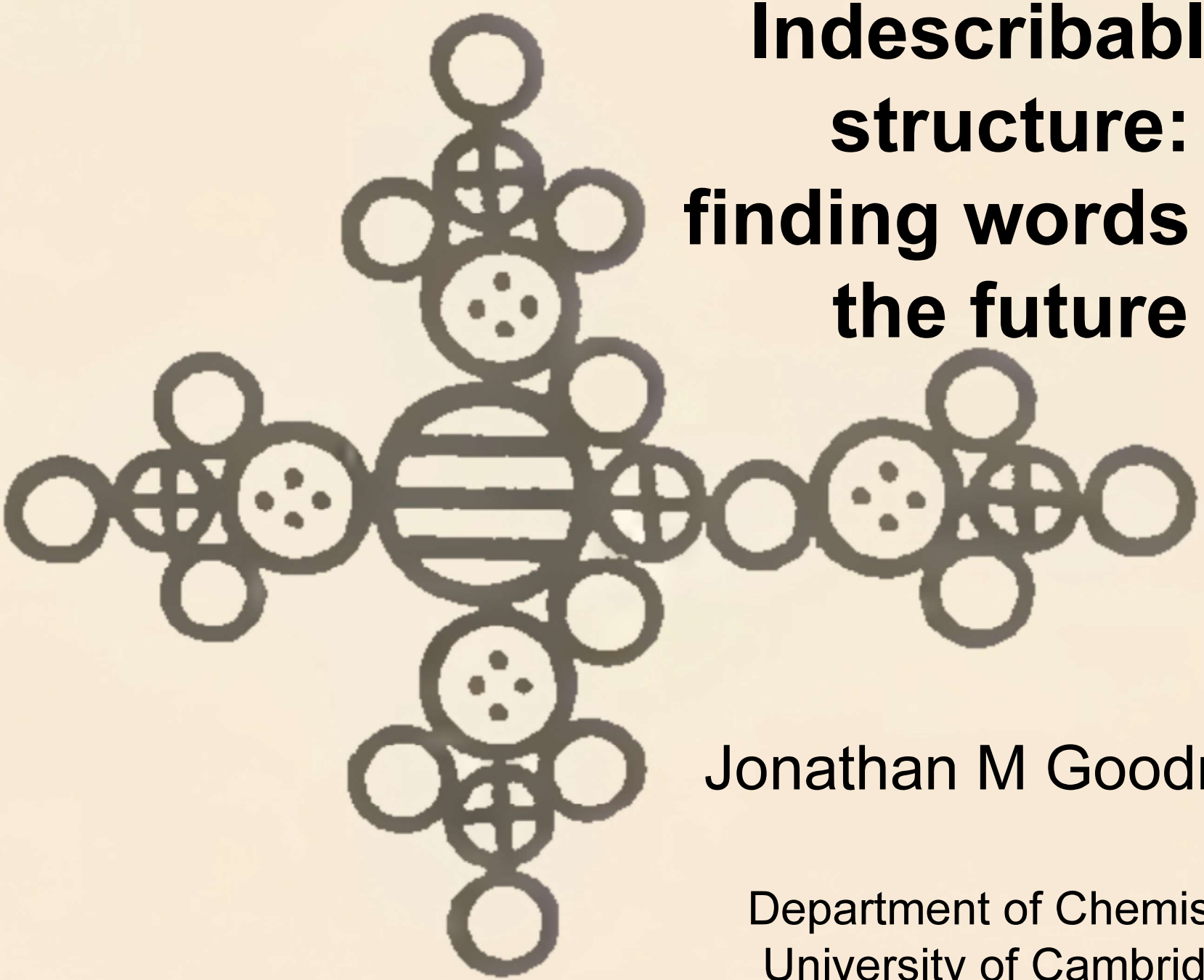
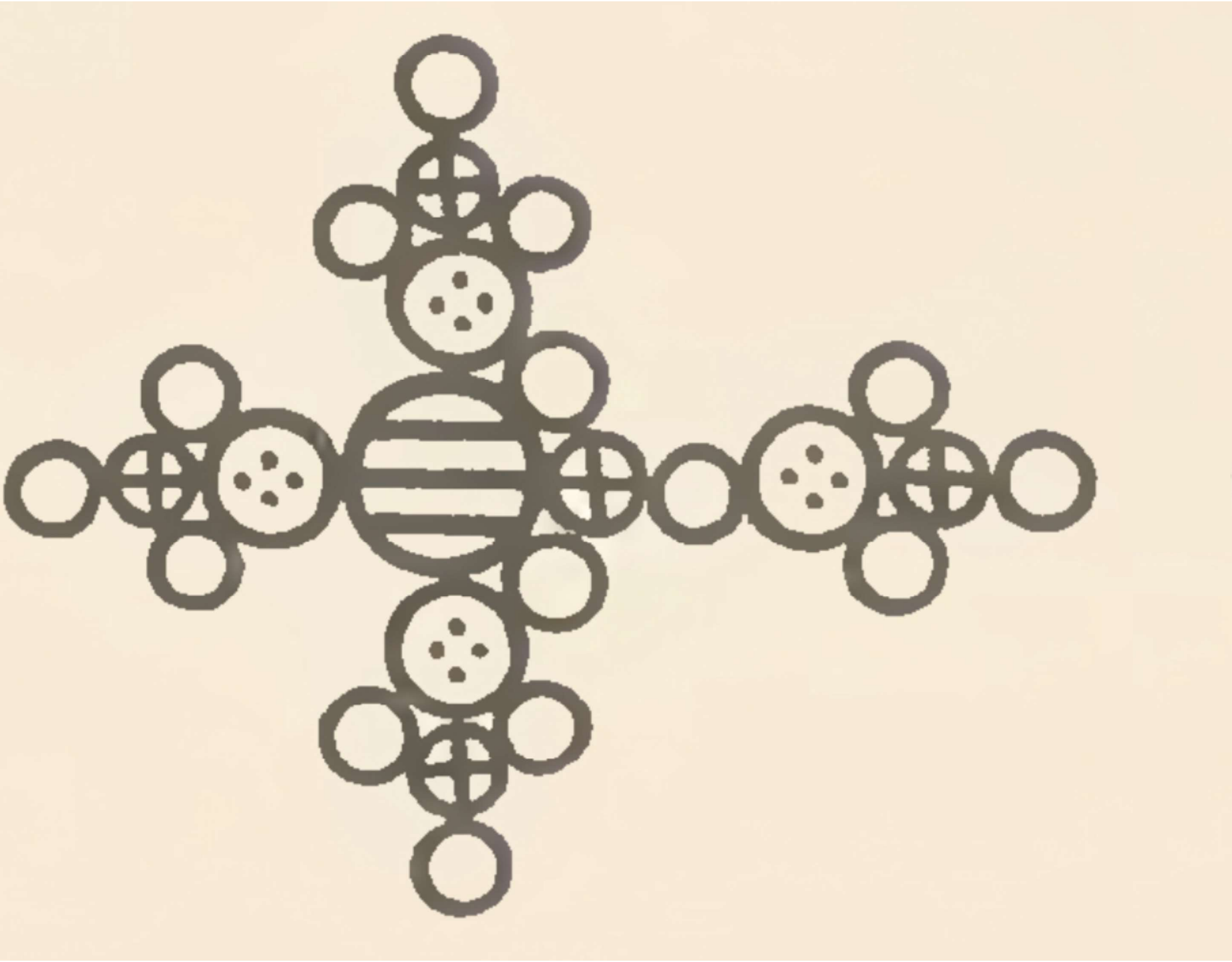


Indescribable structure: finding words for the future

Jonathan M Goodman

Department of Chemistry,
University of Cambridge



A

NEW SYSTEM

OF

CHEMICAL PHILOSOPHY.

PART I.

BY

JOHN DALTON.

REPRODUCED IN FACSIMILE

BY

WILLIAM DAWSON & SONS LTD.
102 WIGMORE STREET,
LONDON, W.1

AND PRINTED BY

HENDERSON & SPALDING
SYLVAN GROVE, OLD KENT ROAD,
LONDON, S.E.15

THIS EDITION IS LIMITED TO 1,000 COPIES

ELEMENTS

Plate 4

Simple

Binary

Ternary

Quaternary

30

31

32

33

Quinquenary & Senenary

34

35

Septenary

36

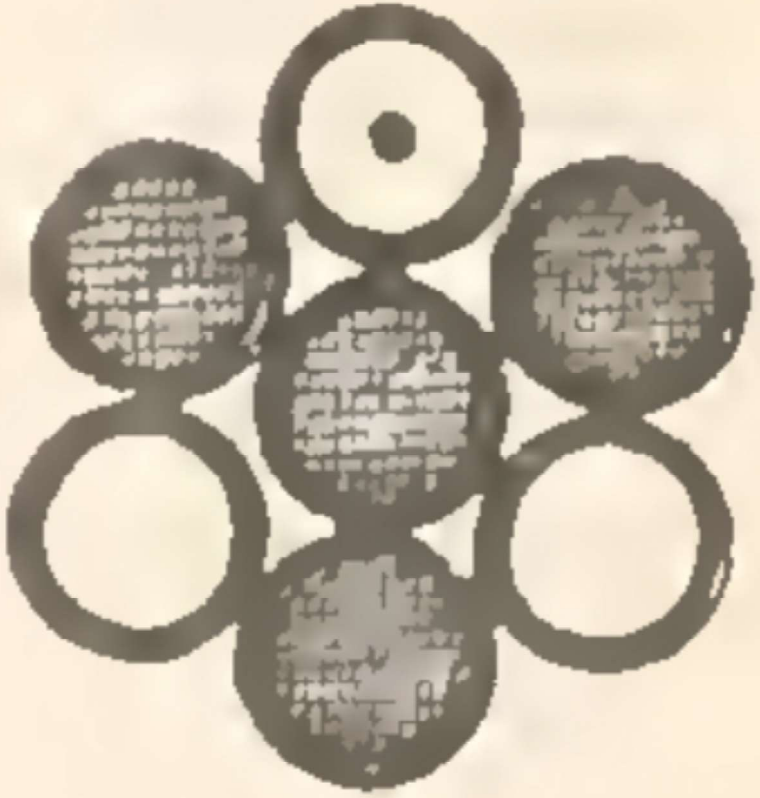
37

WHEN any body exists in the elastic state, its ultimate particles are separated from each other to a much greater distance than in any other state; each particle occupies the centre of a comparatively large sphere, and supports its dignity by keeping all the rest, which by their gravity, or otherwise are disposed to encroach up it, at a respectful distance.

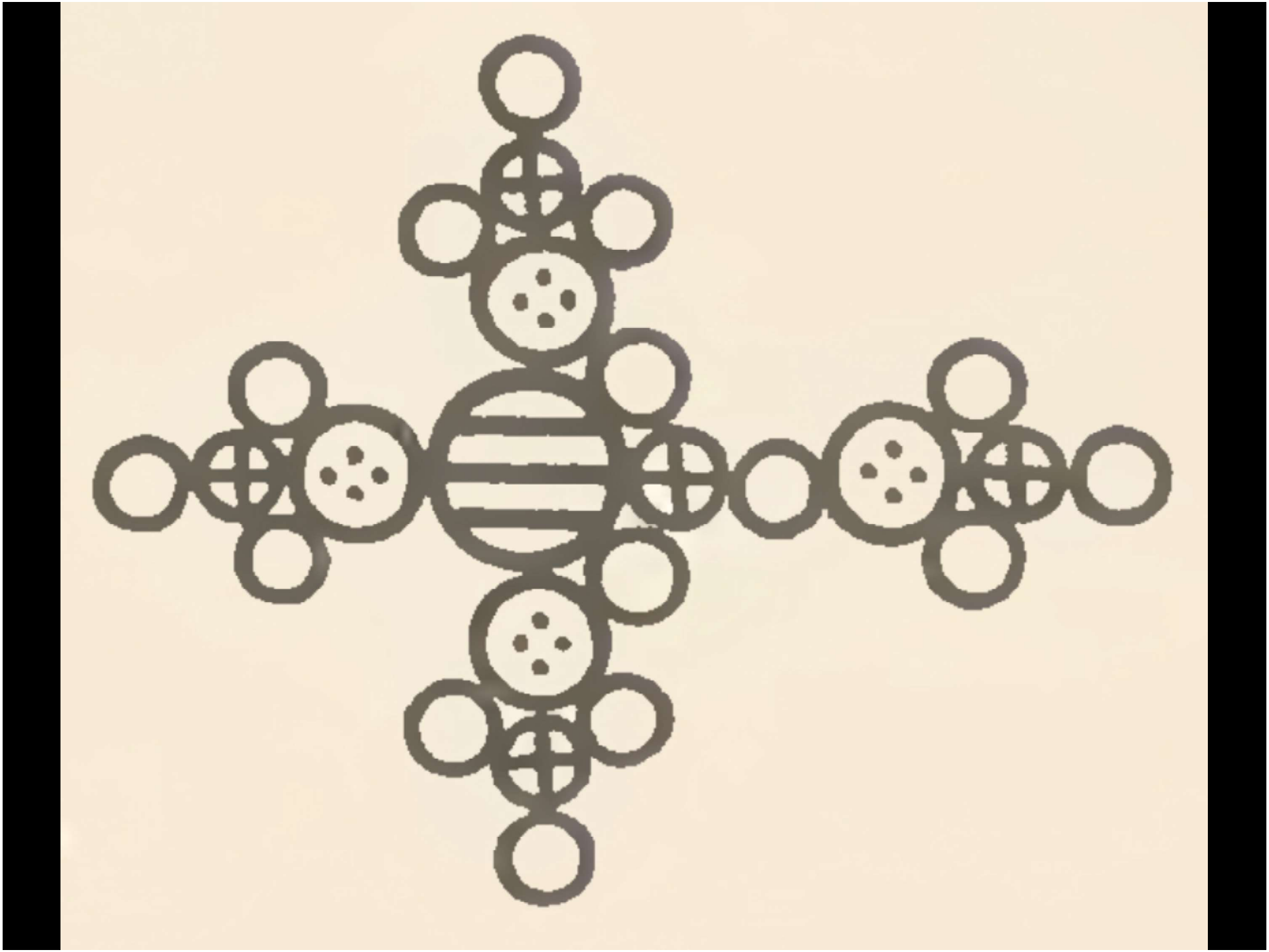
An atom of sugar,

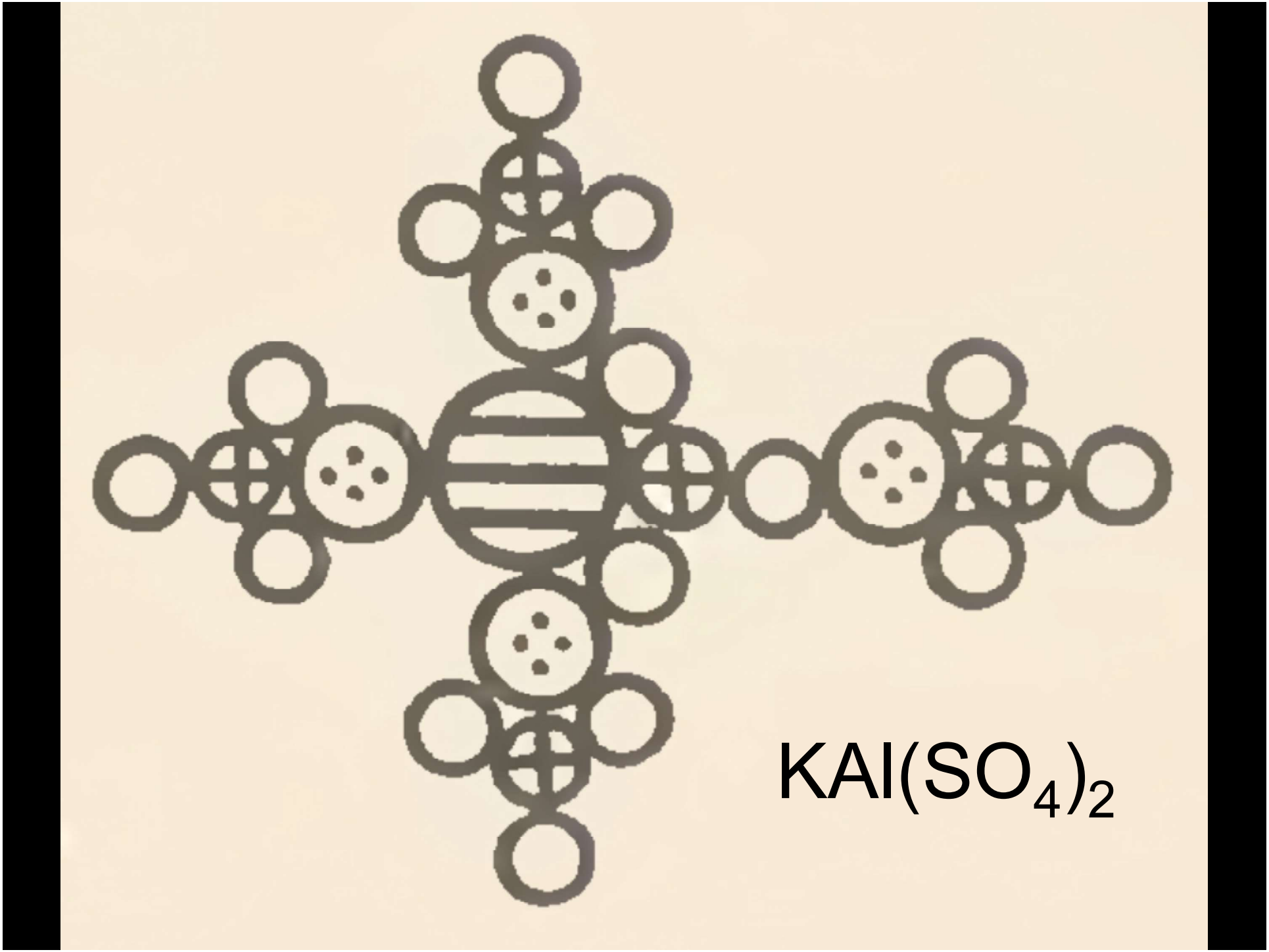
1 alcohol + 1 carbonic acid

Septenary

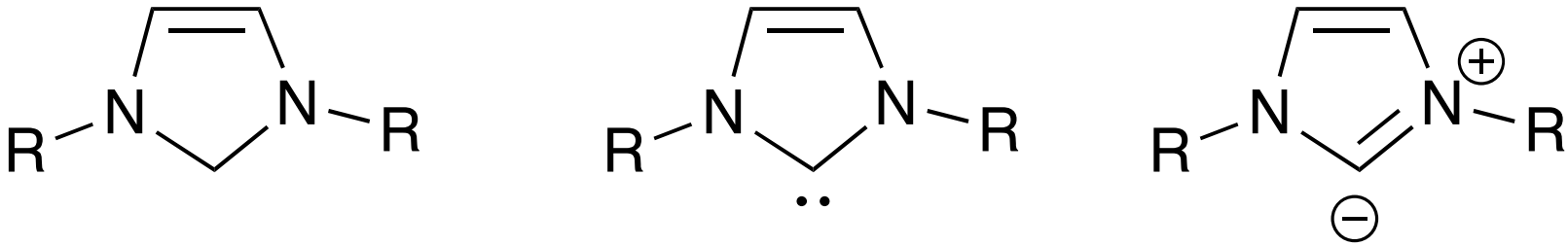


Now it is one great object of this work, to shew the importance and advantage of ascertaining *the relative weights of the ultimate particles, both of simple and compound bodies, the number of simple elementary particles which constitute one compound particle, and the number of less compound particles which enter into the formation of one more compound particle.*

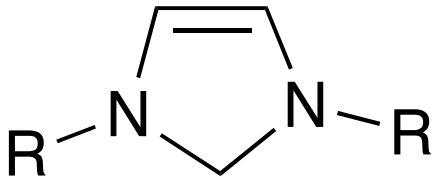


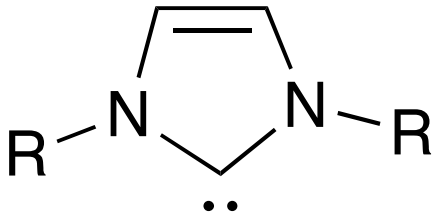

$KAl(SO_4)_2$

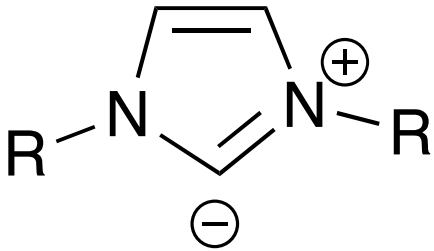
N-Heterocyclic Carbenes

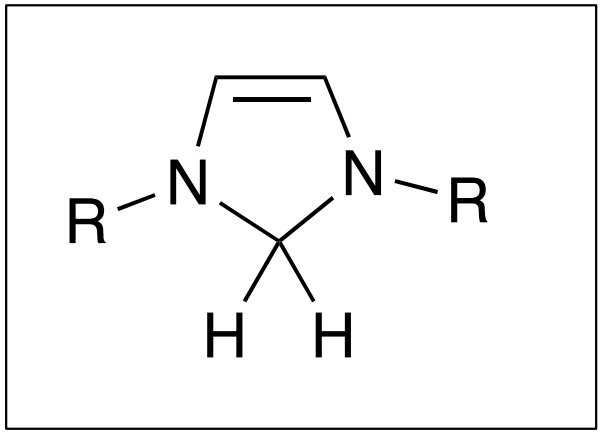


N-Heterocyclic Carbenes

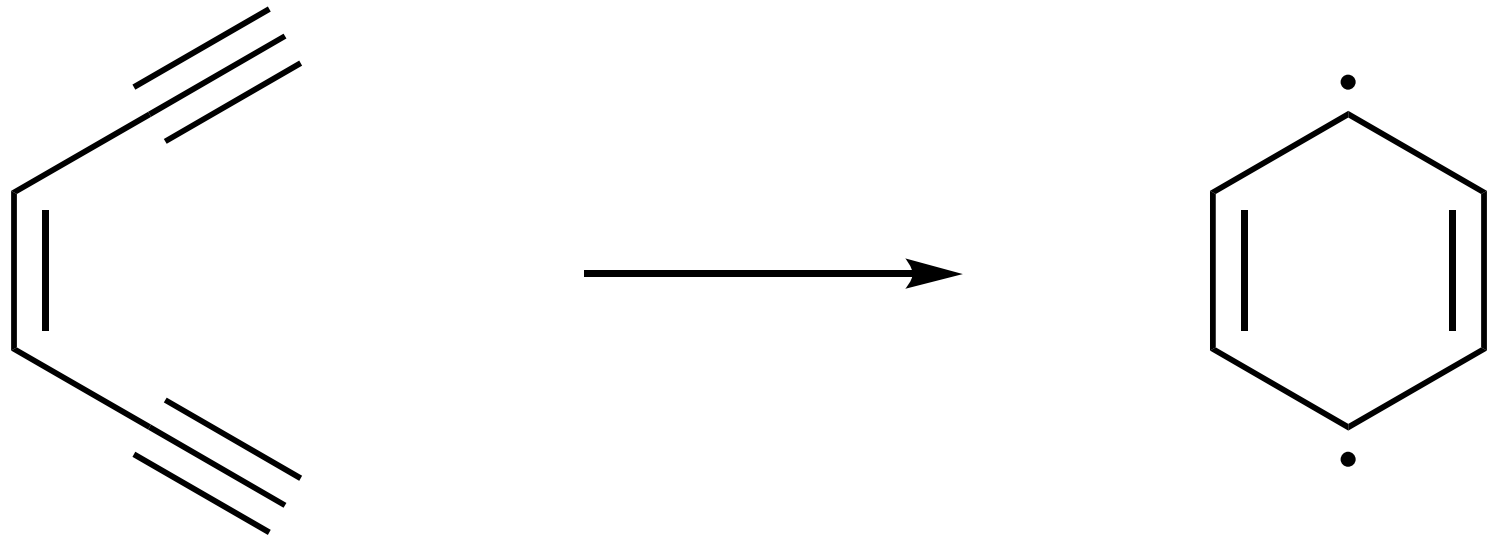




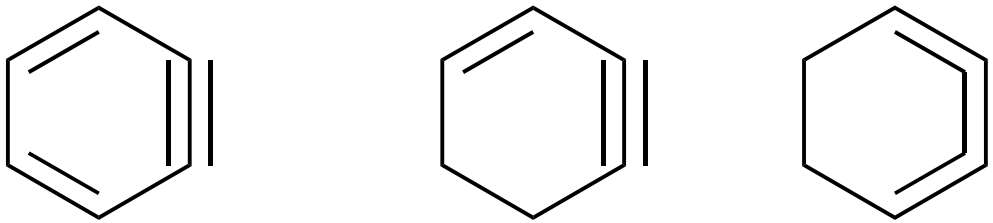




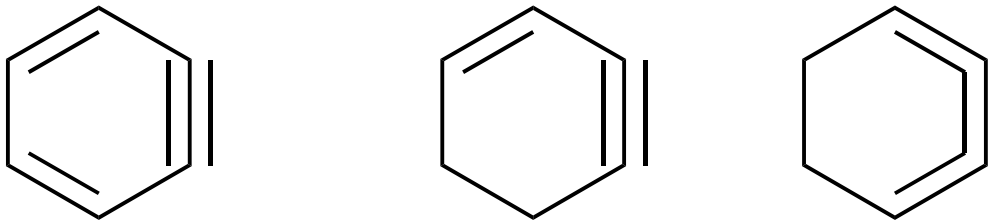
Bergman Cyclisation



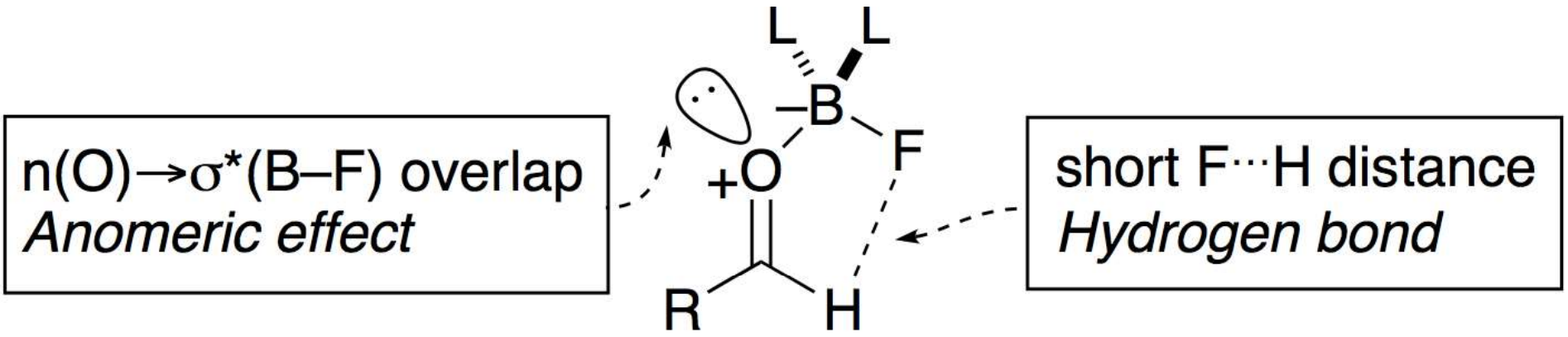
Benzyne



Benzyne



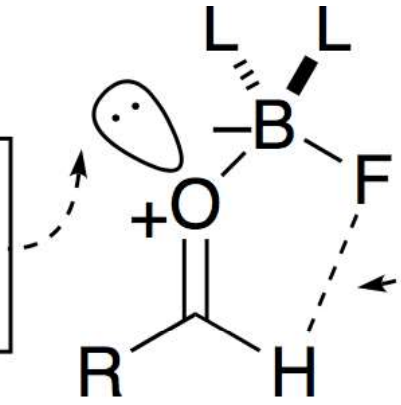
William C Shakespeare **DOI:** 10.1021/ja00179a050



Carbonyl H_2BF complexes: anomeric effect and hydrogen bond

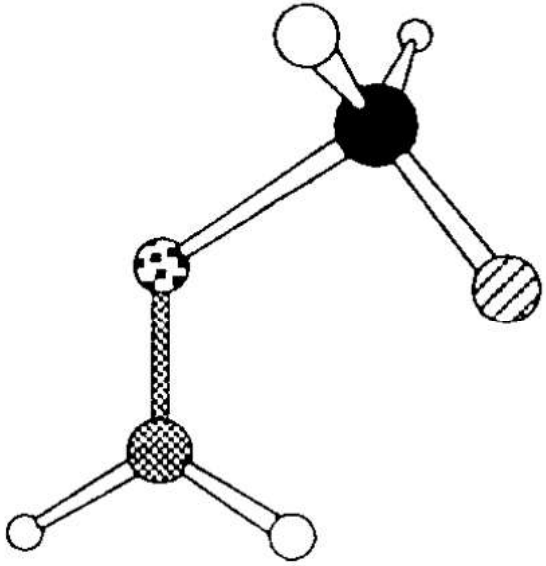
M. D. Mackey, J. M. Goodman *Chem. Comm.* 1997, 2383-2384.
DOI: 10.1039/a706288e

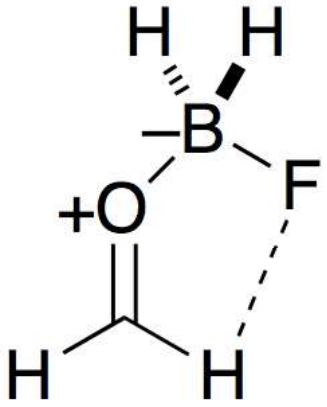
n(O)→σ*(B–F) overlap
Anomeric effect

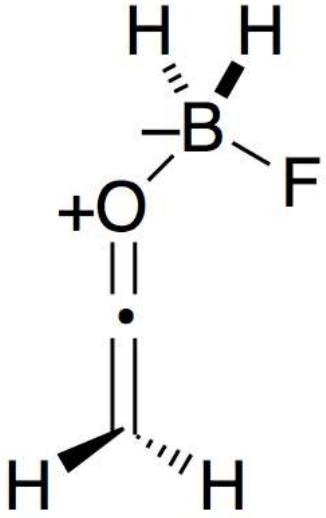


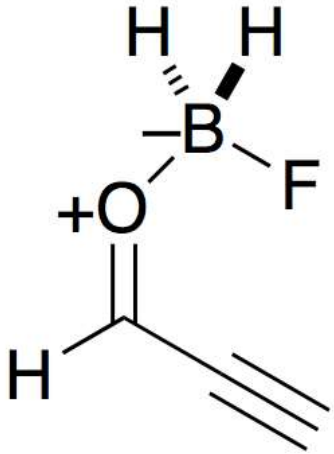
short F···H distance
Hydrogen bond

Carbonyl H_2BF complexes: anomeric effect and hydrogen bond



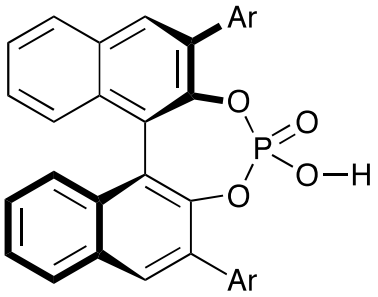




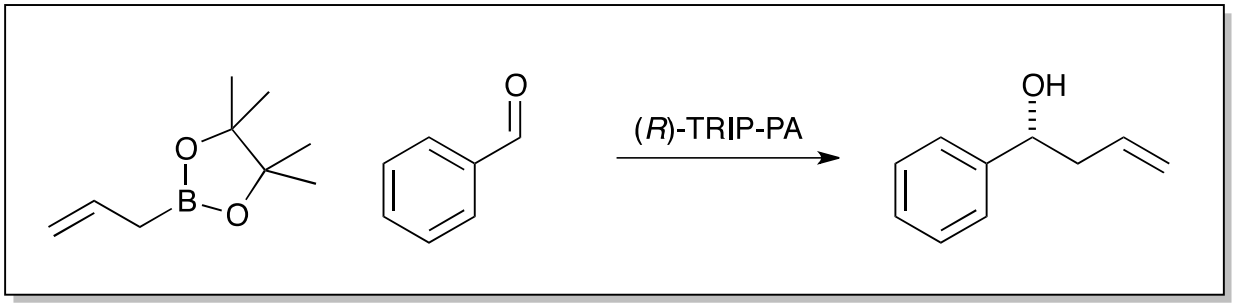


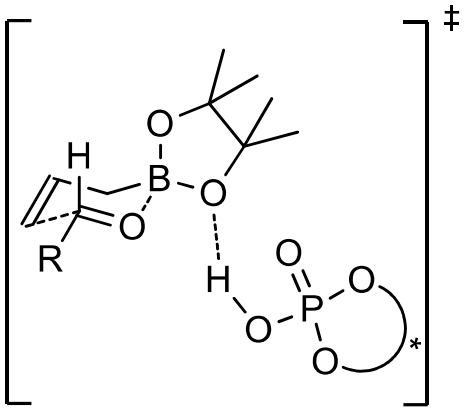
M. D. Mackey, J. M. Goodman *Chem. Comm.* 1997, 2383-2384.
DOI: 10.1039/a706288e

Allylboration of Aldehydes



(*R*)-TRIP-PA



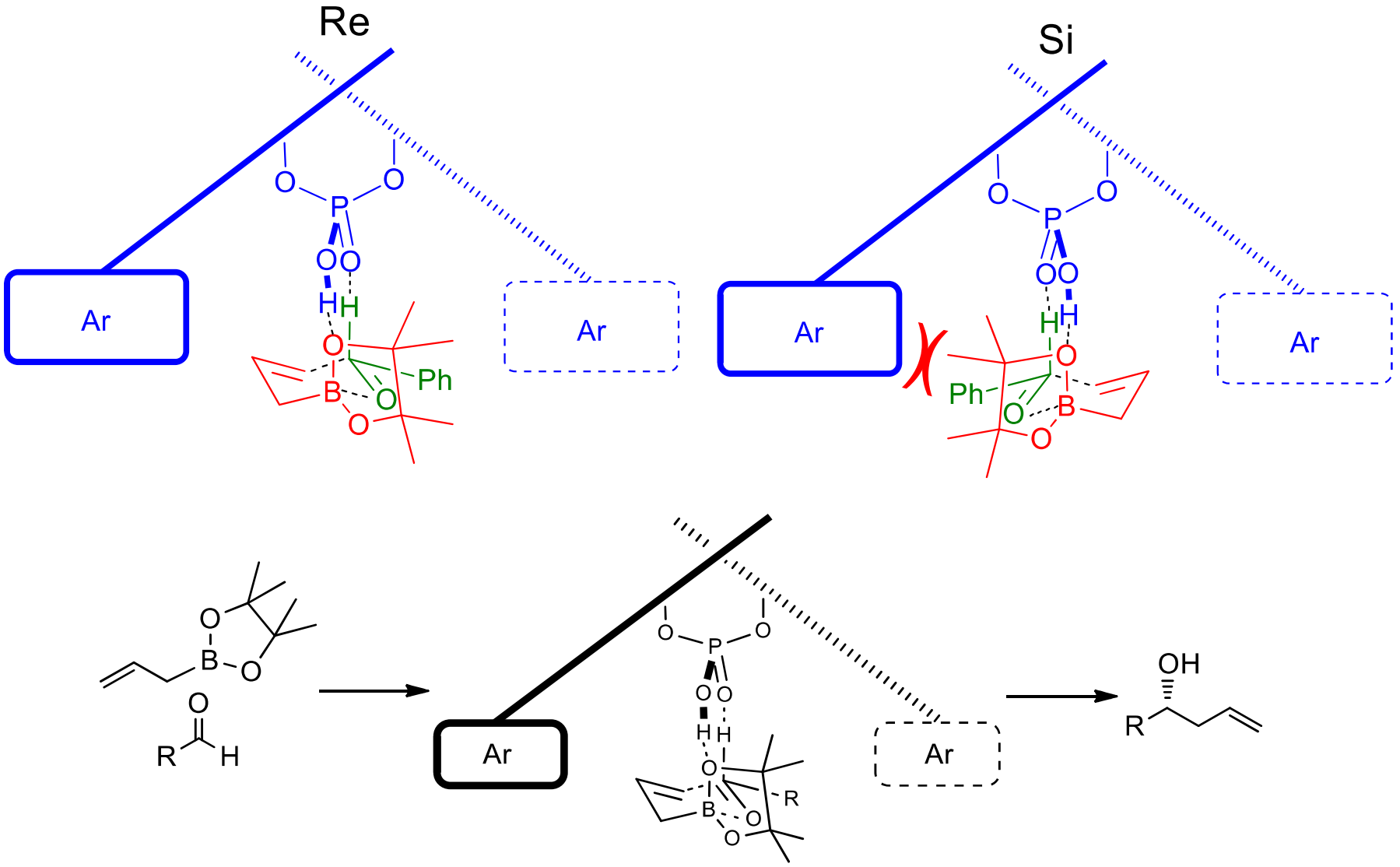


Antilla's Model

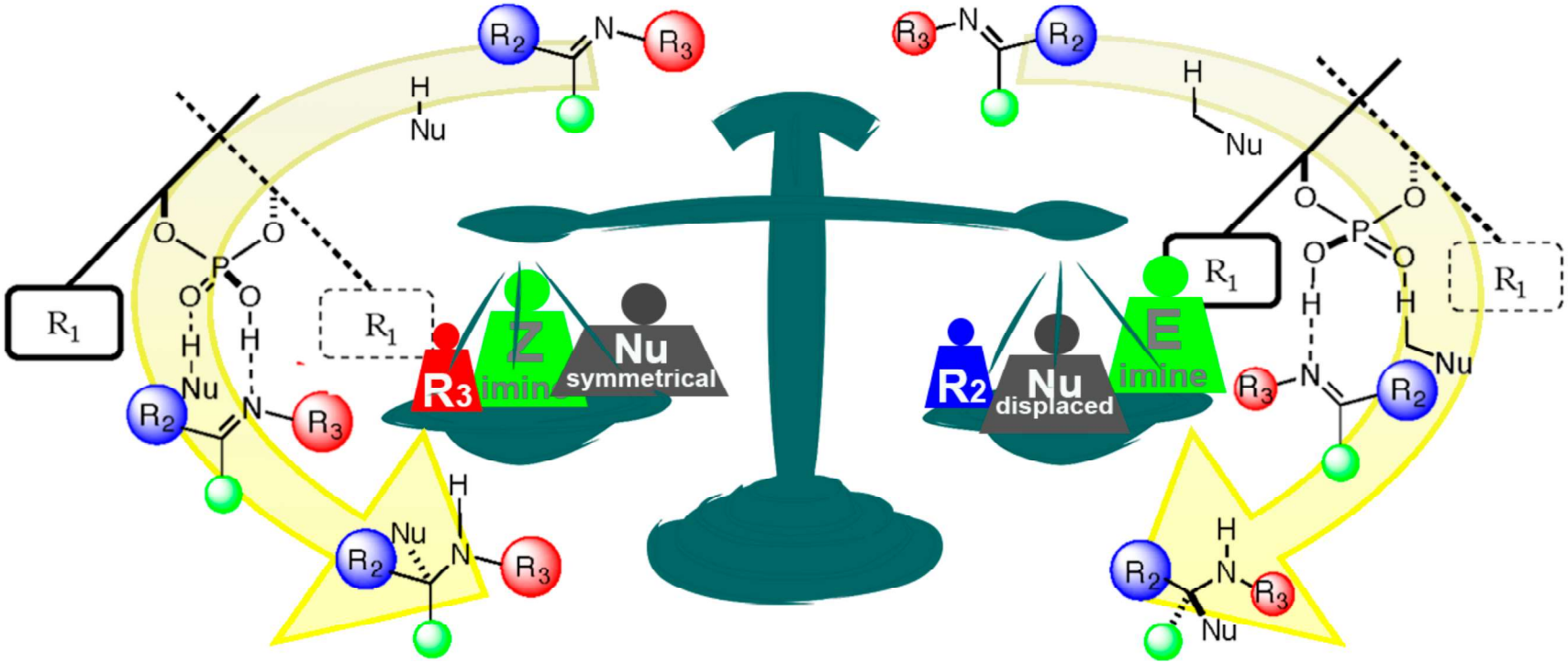
R	Yield	ee
Ph	99 %	98 %
4-ClC_6H_4	98 %	99 %
1-naphthyl	93 %	98 %

Jain, P.; Antilla, J. C., *J. Am. Chem. Soc.* **2010,** *132,* 11884

Allylboration Model



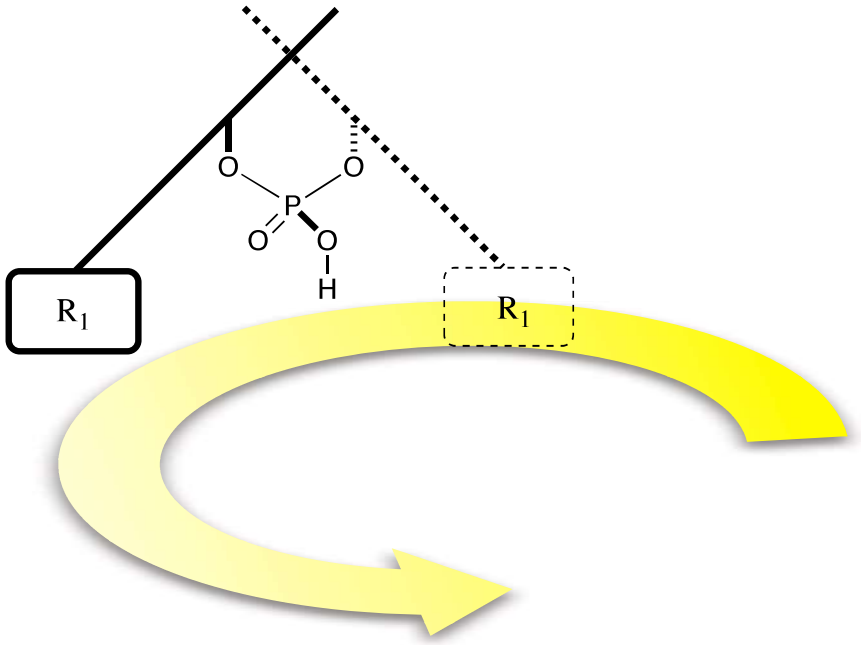
Grayson, M. N.; Pellegrinet, S. C.; Goodman, J. M. *J. Am. Chem. Soc.* **2012**, *134*, 2716



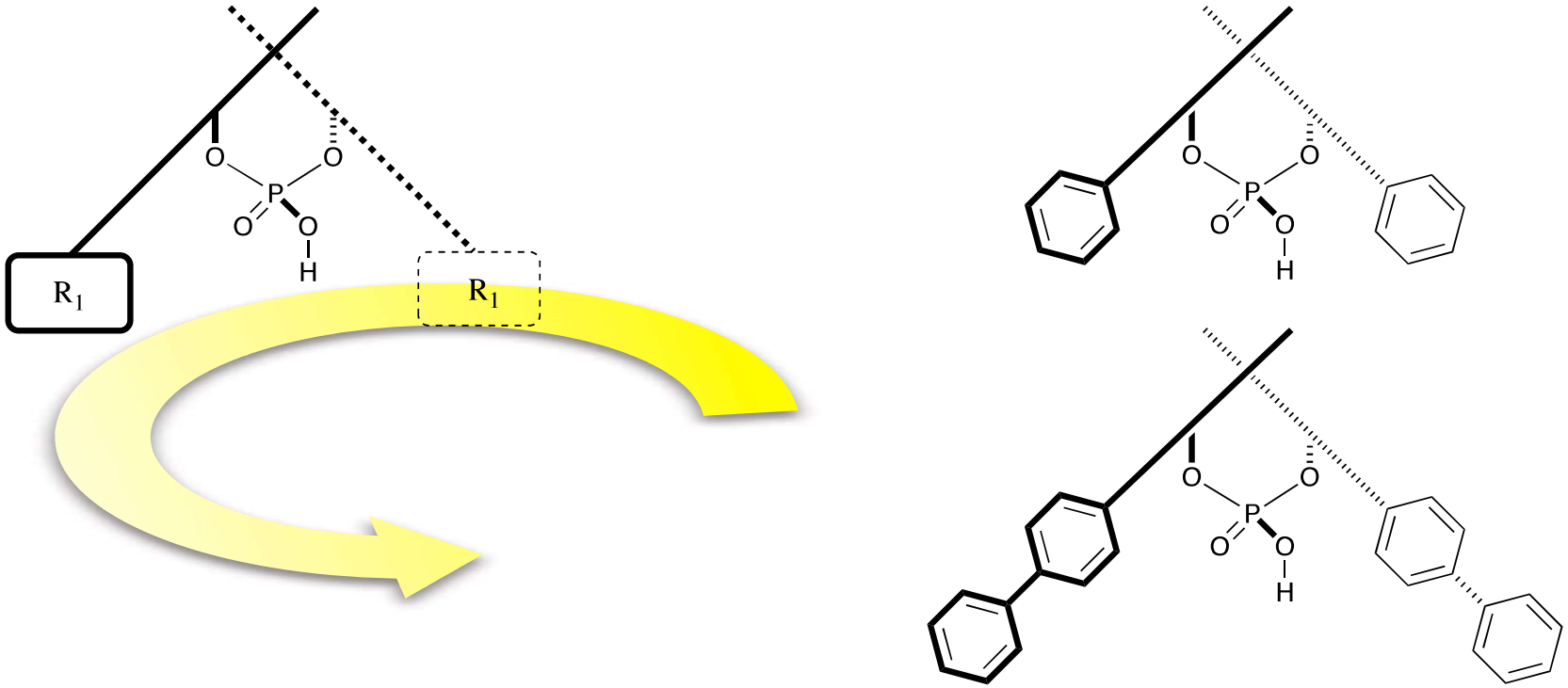
A Practical Guide for Predicting the Stereochemistry of Bifunctional Phosphoric Acid Catalyzed Reactions of Imines

J. P. Reid, L. Simon and J. M. Goodman

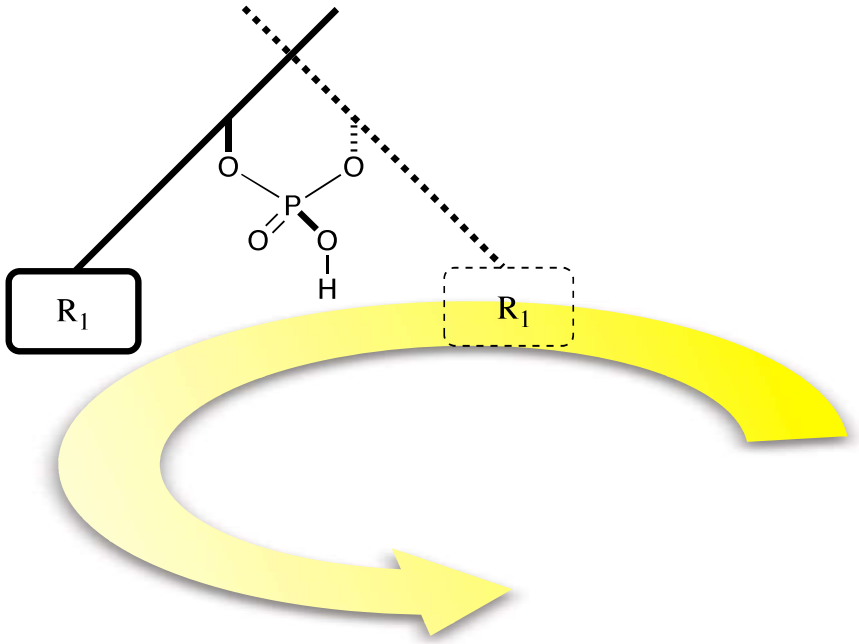
Acc. Chem. Res. 2016, **49**, 1029-1041.
DOI: 10.1021/acs.accounts.6b00052

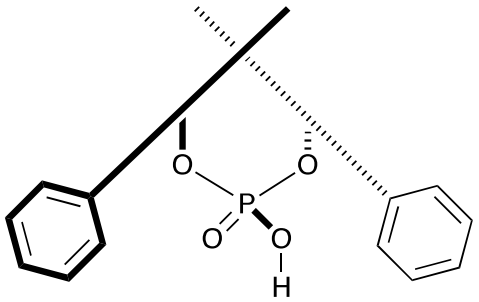


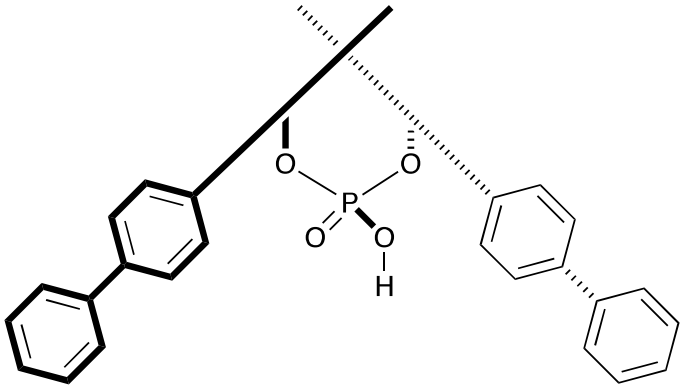
J. P. Reid and J. M. Goodman
J. Am. Chem. Soc. 2016, **138**, 7910-7917.
DOI: 10.1021/jacs.6b02825

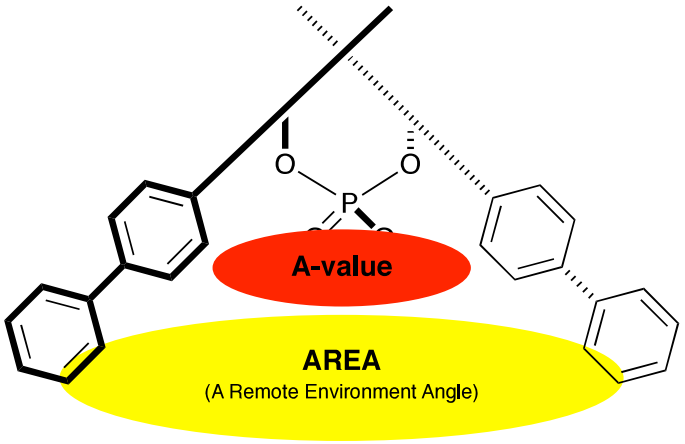


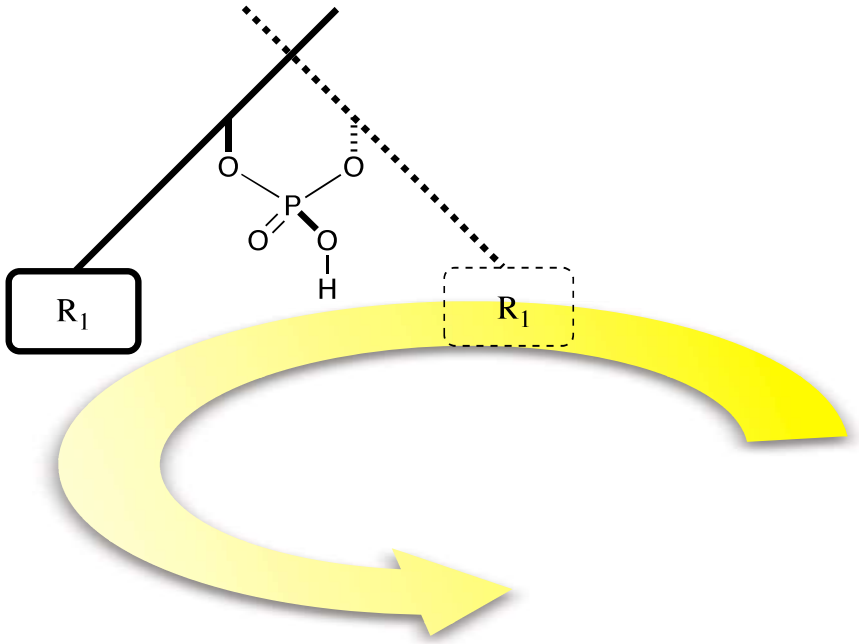
J. P. Reid and J. M. Goodman
J. Am. Chem. Soc. 2016, **138**, 7910-7917.
DOI: 10.1021/jacs.6b02825

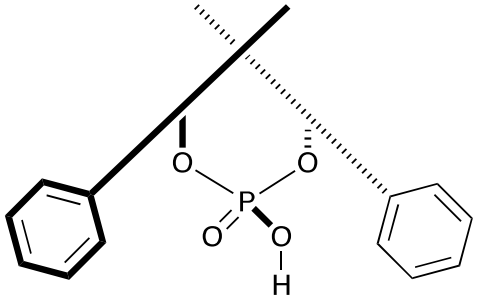

R1
R1

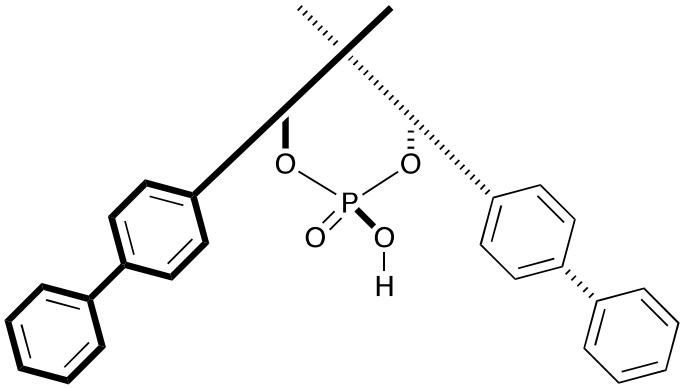


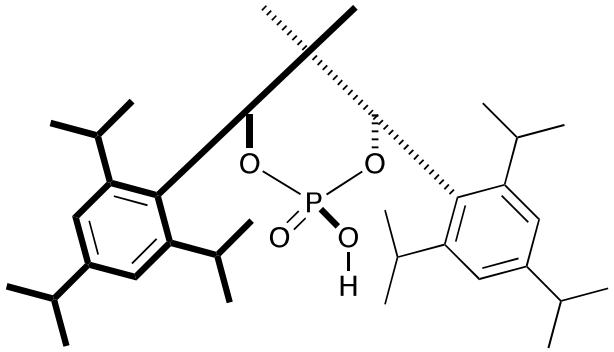



A-value
AREA
(A Remote Environment Angle)



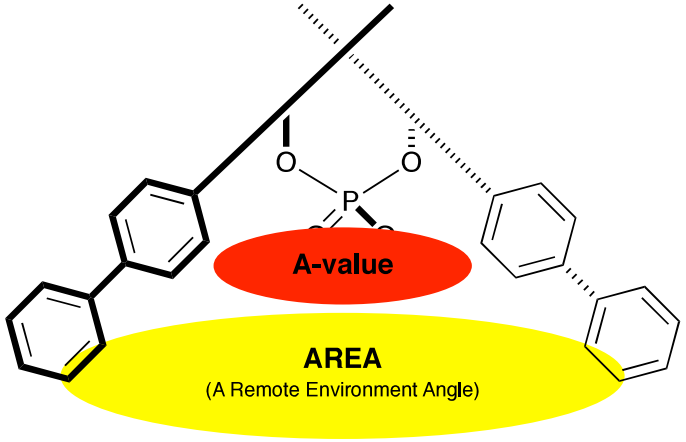


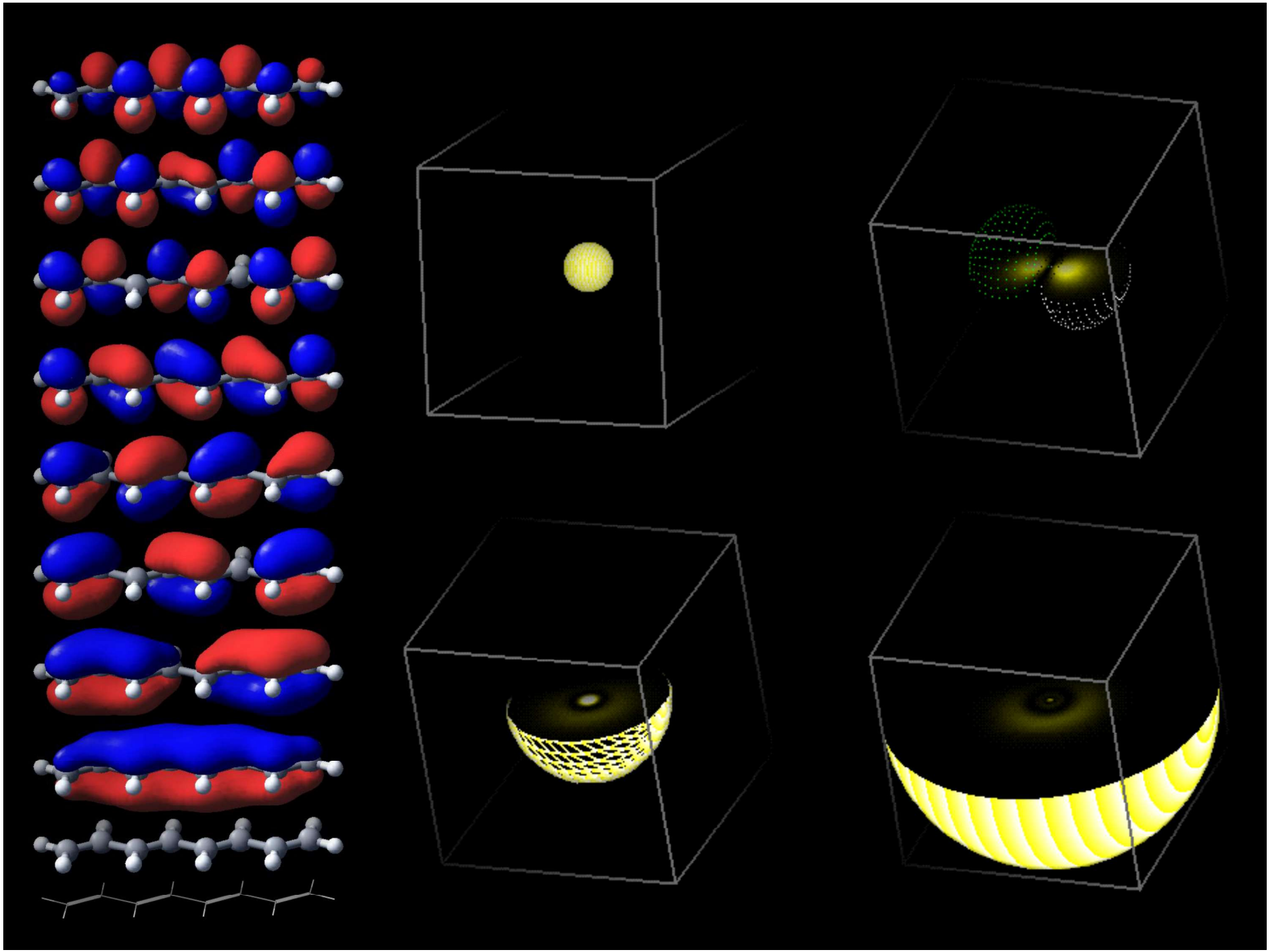


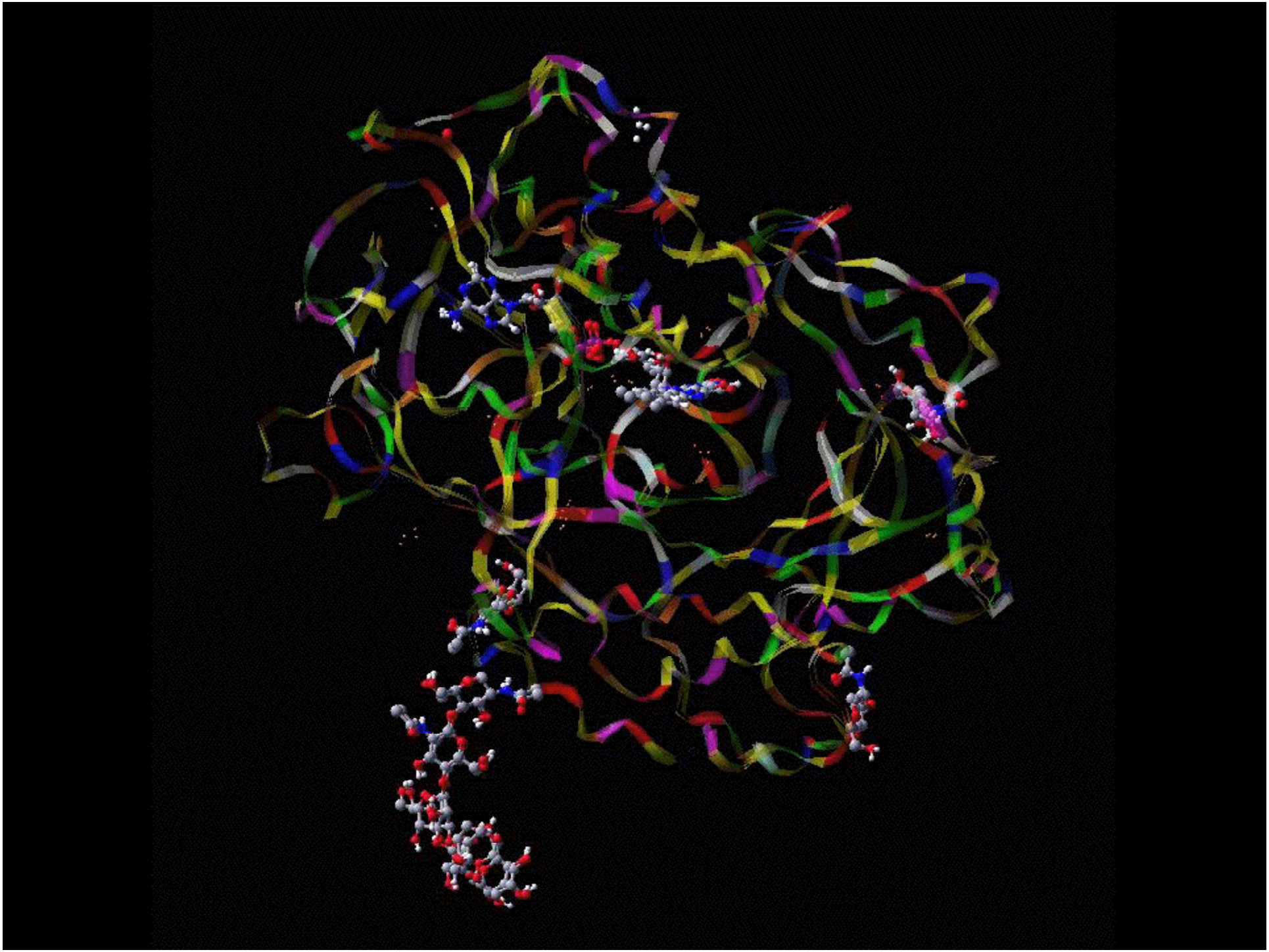


"TRIP"

AREA(51)



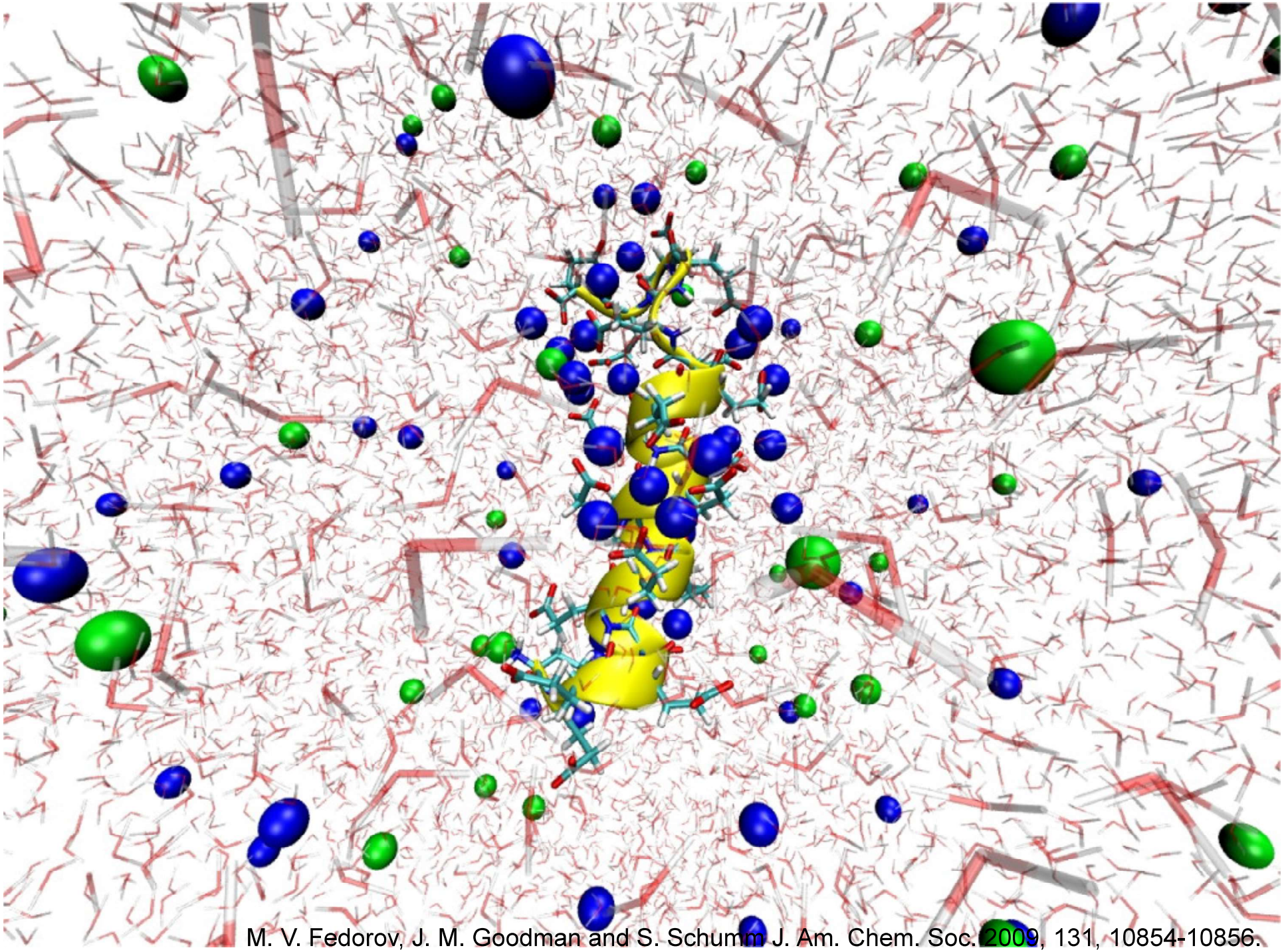




Solubility Challenge

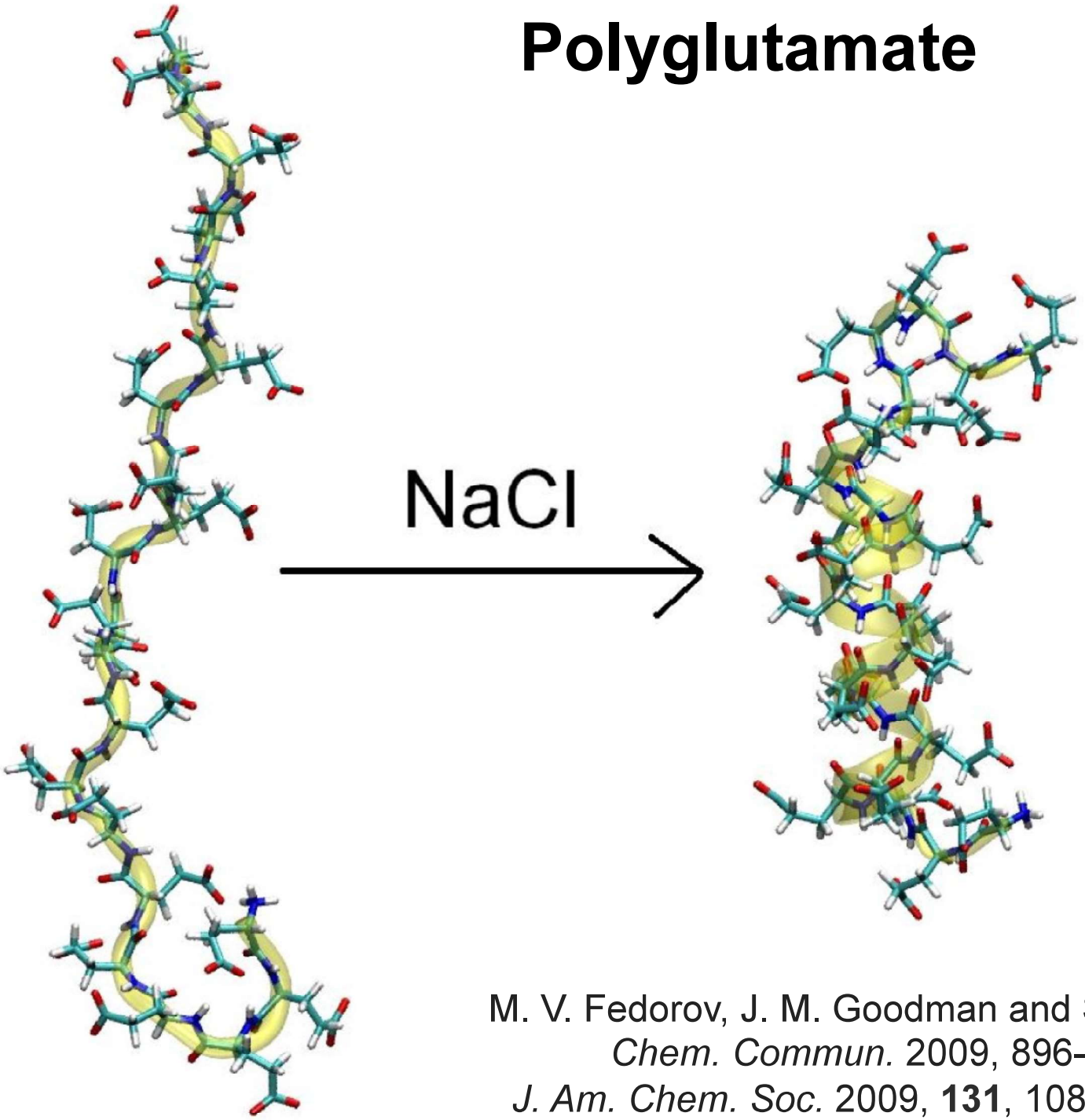
Can You Predict Solubilities of Thirty-Two Molecules Using a Database of One Hundred Reliable Measurements?

J. Chem. Inf. Model. 2008, **48**, 1289-1303.

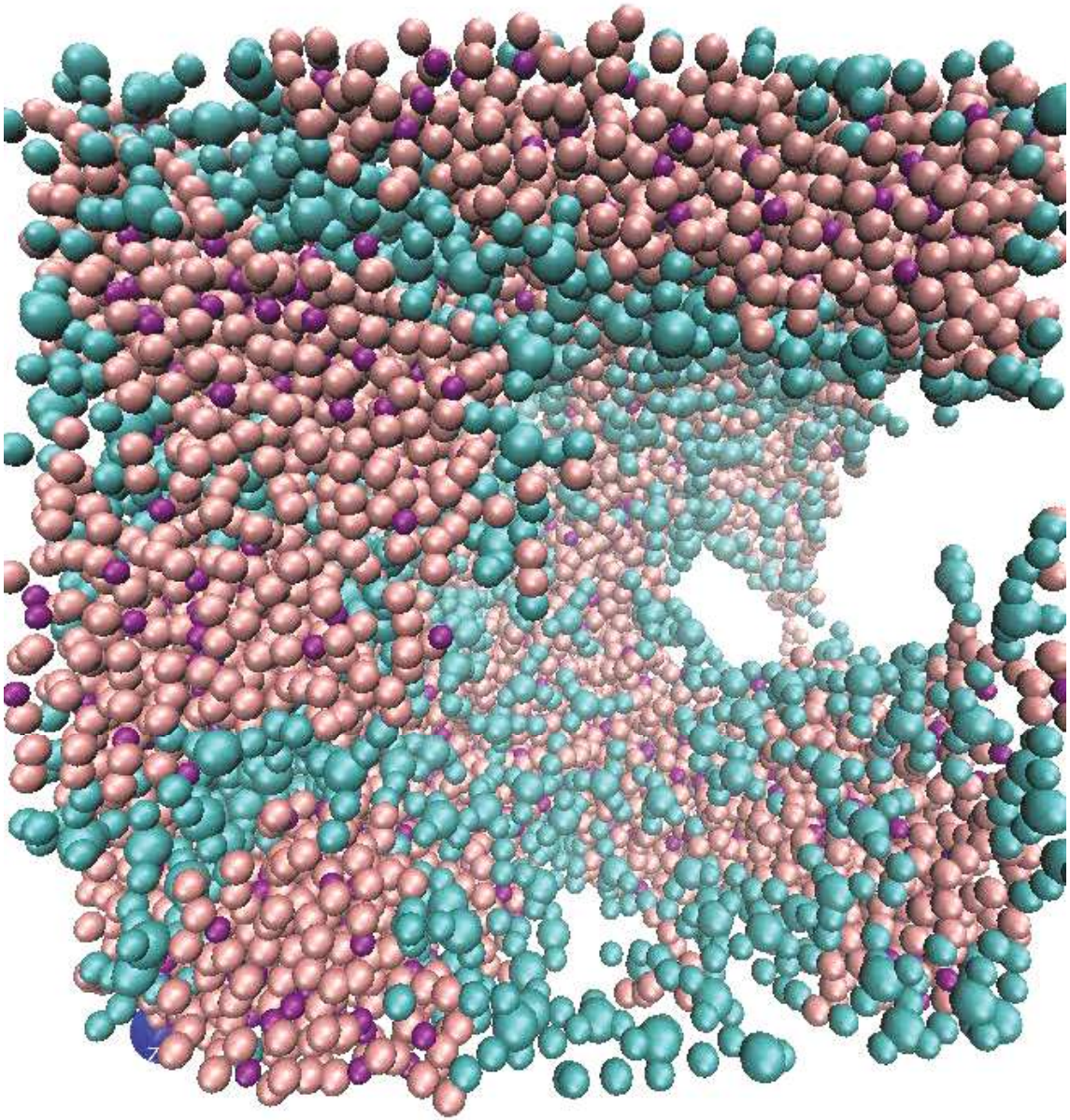


M. V. Fedorov, J. M. Goodman and S. Schumm J. Am. Chem. Soc. 2009, 131, 10854-10856.

Polyglutamate



M. V. Fedorov, J. M. Goodman and S. Schumm
Chem. Commun. 2009, 896-898.
J. Am. Chem. Soc. 2009, **131**, 10854-10856.



www-rinchi.ch.cam.ac.uk

University of Cambridge Department of Chemistry Goodman Group

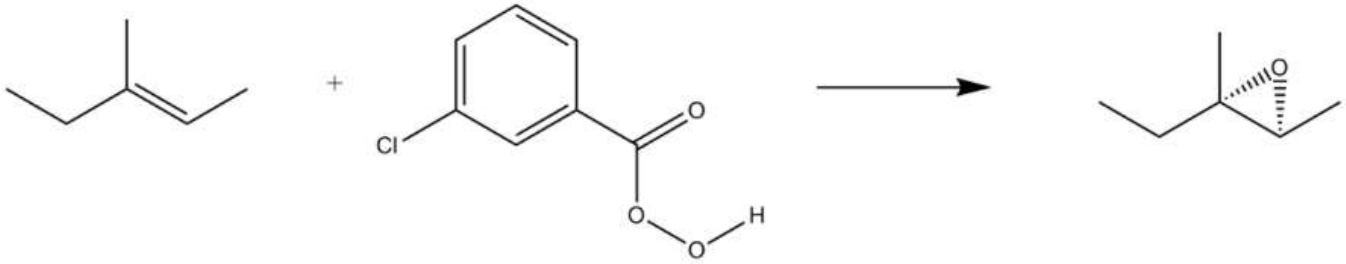
Analysis Conversion Database Tools Help Download Latest Software Examples Documentation

The RInChI Project

The aim of the RInChI project, in the same vein as InChI, is to create a unique data string to describe a reaction. Reaction InChIs, or RInChIs, are such data strings. They use the InChI software and from an rxn input file a RInChI can be created. The tools for doing this are below, and some helpful information is given in the help pages.

RInChI Versions

Tools on this site work with RInChI v1.00 unless otherwise stated. All tools run with Python 3

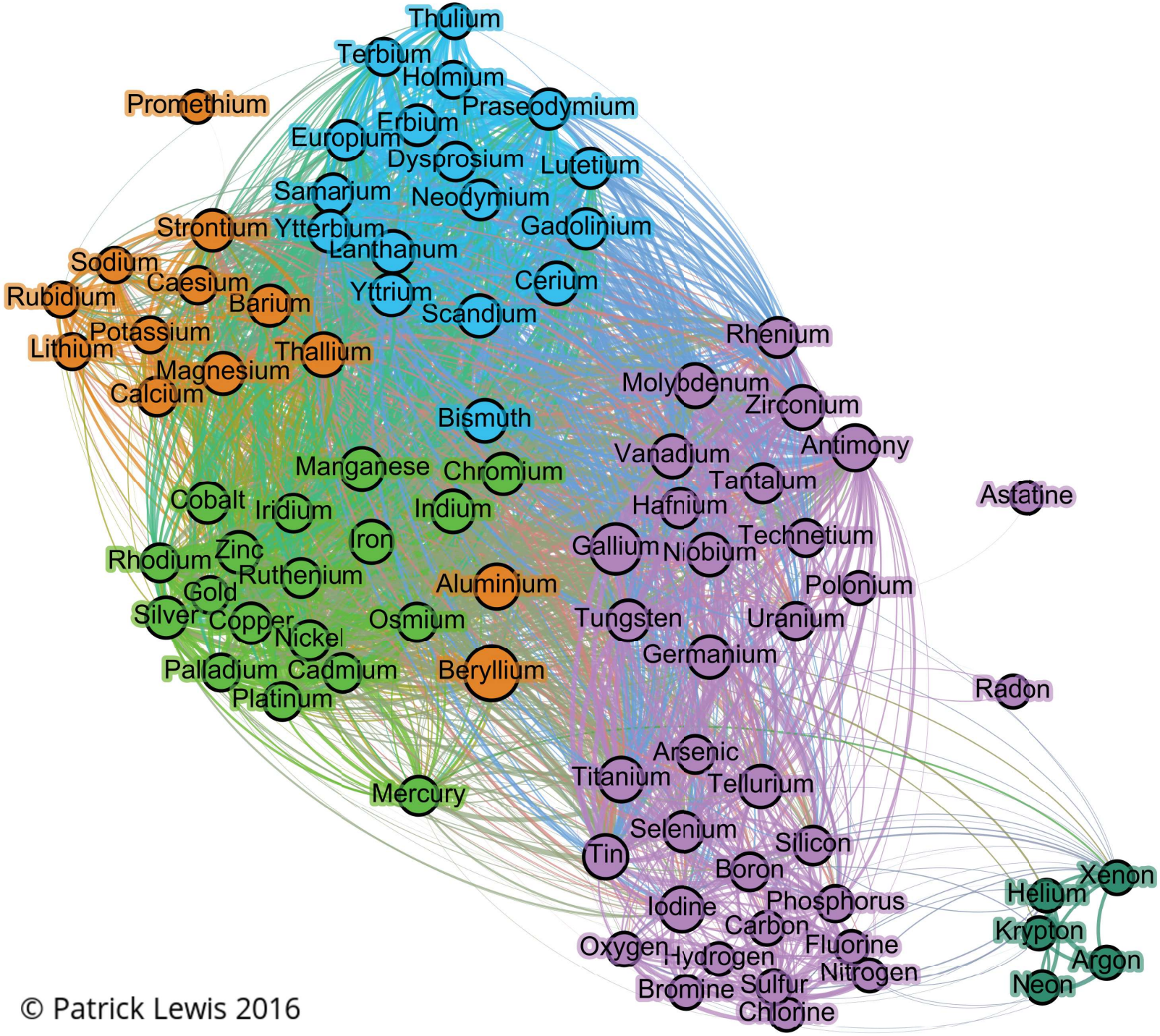



```
RInChI=1.00.1S/C6H12/c1-4-6(3)5-2/h4H,5H2,1-3H3/b6-4+!C7H5ClO3/c8-6-3-1-2-5(4-6)7(9)11-10/h1-4,10H<>C6H12O/c1-4-
6(3)5(2)7-6/h5H,4H2,1-3H3/t5-,6-/m0/s1/d+
```

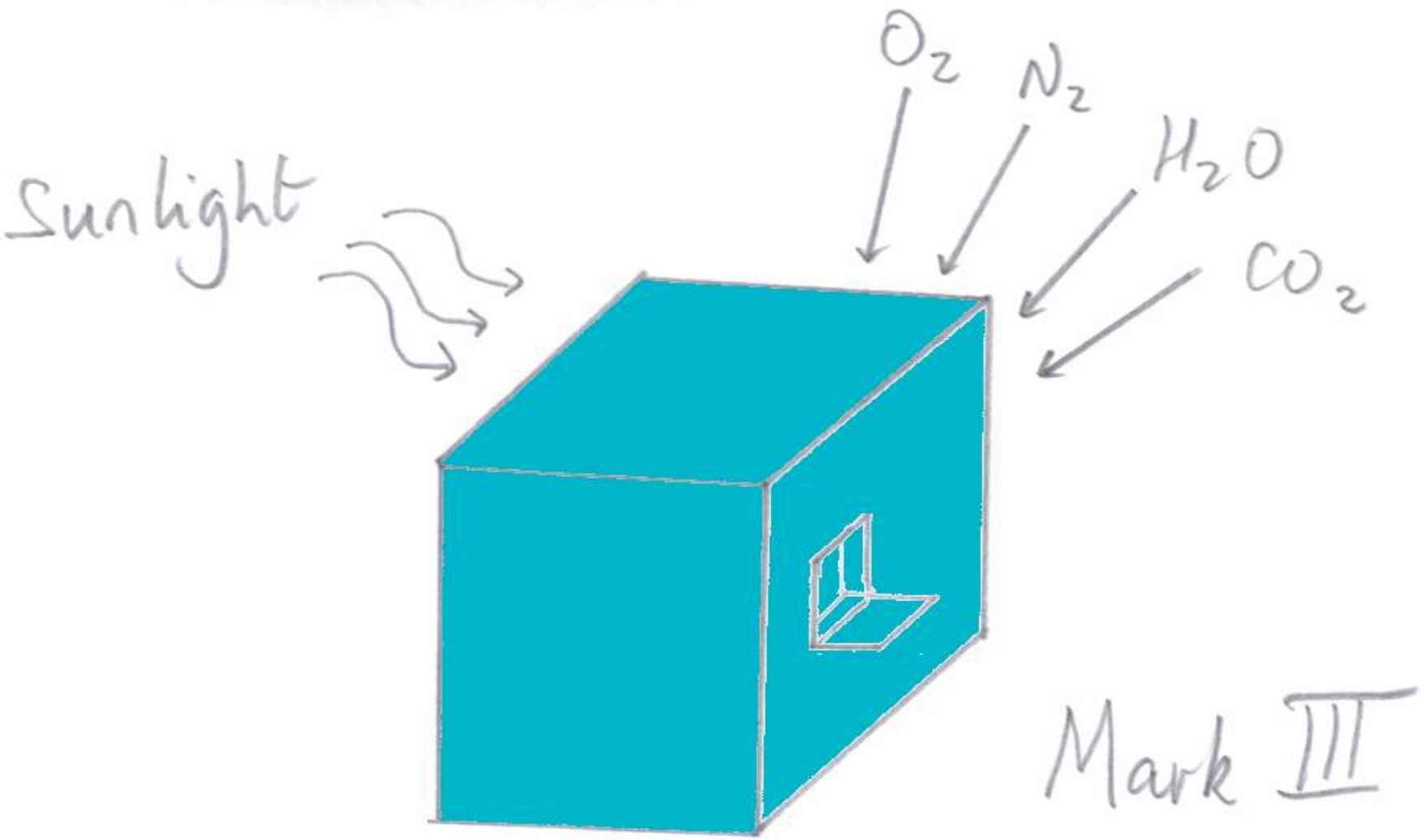
Example of a RInChI v1.00

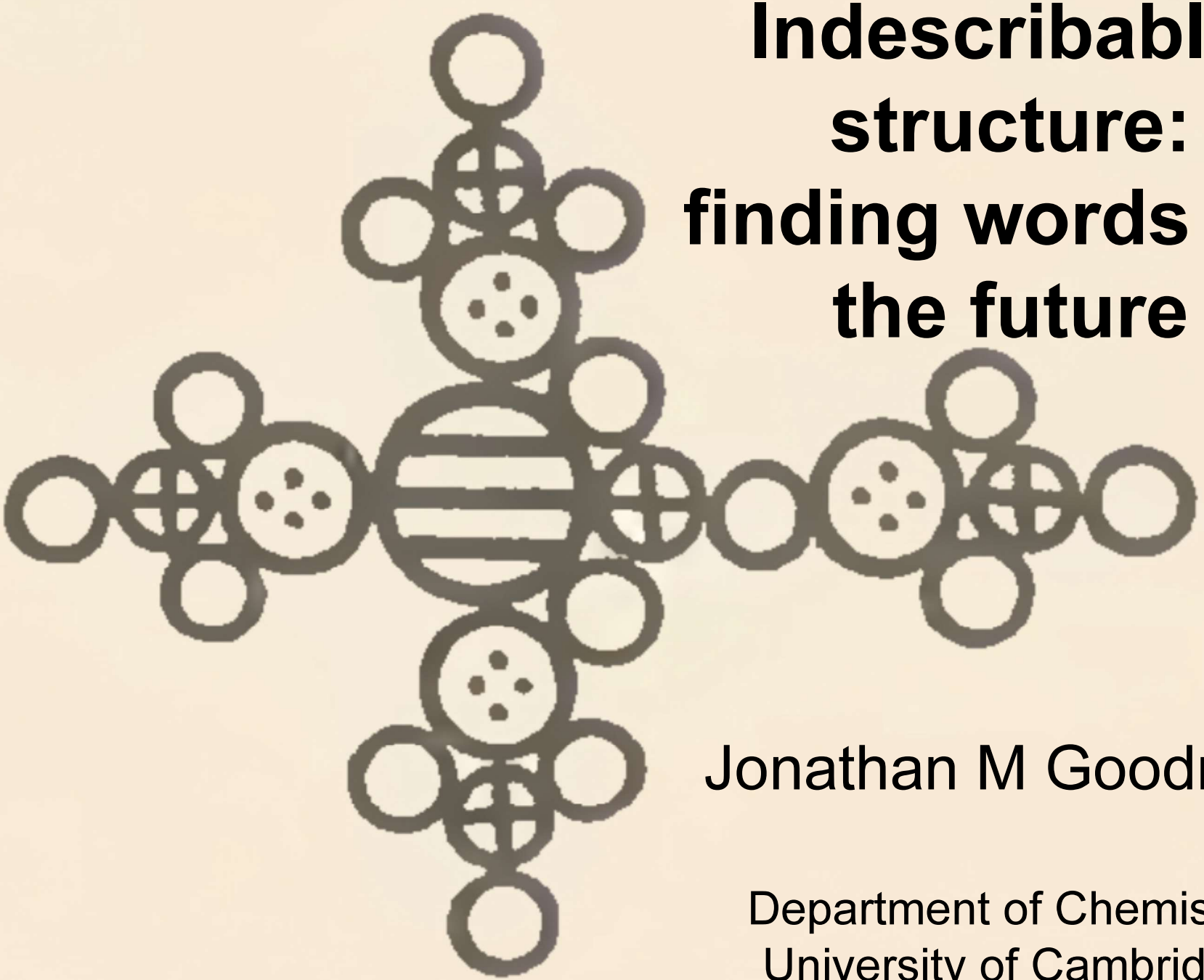
Information provided by jmg11@cam.ac.uk

Privacy



Dial a Molecule





Indescribable structure: finding words for the future

Jonathan M Goodman

Department of Chemistry,
University of Cambridge