References - chem 131b (winter '02)

Note: I will continue to add to this page as the quarter progresses.

For additional references related to the following, I'd recommend that you use "SciFinder Scholar."


Use of Claisen rearrangement:


Nazarov reaction:


Some references to Corey PG synthetic work that appeared 1969-1971. Use SciFinder Scholar for a significantly more complete list, including recent references.


Corey E J; Schaaf T K; Huber W; Koelliker U; Weinshenker N M  Total synthesis of prostaglandins F2-alpha and E2 as the naturally occurring forms.  JOURNAL OF THE AMERICAN CHEMICAL SOCIETY  (1970 Jan 28), 92(2), 397-8.


Corey E J; Nyori R; Schaaf T K  Total synthesis of prostaglandins F1-alpha, E1, F2-alpha, and E2 (natural forms) from a common synthetic intermediate.  JOURNAL OF THE AMERICAN CHEMICAL SOCIETY  (1970 Apr 22), 92(8), 2586-7.


Stork references of import to problem set 3:


Stork, Gilbert; Takahashi, Takashi; Kawamoto, Isao; Suzuki, Toshio.  Total synthesis of prostaglandin F2α by chirality transfer from D-glucose.  J. Am. Chem. Soc.  (1978), 100(26), 8272.


Secondary orbital interactions:


ln(k) vs HOMO/LUMO energy gap


Radical chemistry


You may wish to find and read articles by some or all of the following researchers; SciFinder Scholar is a great place to start your search/selection. Here's a much abbreviated list of the many persons who have contributed to the development of radical chemistry: Walling, Barton, Stork, Beckwith, Ingold, Giese, Viehe, Porter, Curran, Hart, Newcomb … and many others.

Rates of a fairly wide range of radical reactions - an excellent source

Newcomb, Martin.  **Competition methods and scales for alkyl-radical reaction kinetics.**  Tetrahedron (1993), 49(6), 1151-76.

Calicheamicin


Salzberg, Aaron A.; Dedon, Peter C.  **DNA bending is a determinant of calicheamicin target recognition.**  Biochemistry (2000), 39(25), 7605-7612.


Captodative radicals

Captodative substituent effect. Part 45.
Captodative substituent effects in radical chemistry. Pure Appl. Chem. (1988), 60(11), 1635-44.

Cyclopropylcarbinyl radical


Useful theoretical approaches to assessing radical chemistry - from Leroy's lab


Leroy, G.; Sana, M.; Wilante, C. Substituent effects on the strength of single bonds and in free-radical chemistry. THEOCHEM (1990), 64 97-111.


Barton thiohydroxamates

A few references to photochemistry

A good web site address to cover a multitude of photochemical concepts. There appear to be 13 parts. To view each, simply change from "Part02" to another number … 1-13
http://www.columbia.edu/itc/chemistry/photochem/tito_slides/Part02.pdf


**Electrochemistry**


The following reference is to one chapter in a comprehensive treatise dealing with organic electrochemistry. It is an excellent reference source:


The next reference is to a book chapter, this time to the wonderful series called "Topics in Current Chemistry" (aka Fortschritte der Chemische Forschung"). Have a look at the general series; it deals with many topics besides electrochemistry:


Enzymes/enzyme cofactors

Serine proteases
http://www.cryst.bbk.ac.uk/PPS2/course/section12/serprot3.html

chymotrypsin
http://www.cryst.bbk.ac.uk/PPS2/course/section12/serprot4.html

thymidylate synthase
http://csbcc1.csbcc.dartmouth.edu/ts.html

the RNA world - leisure reading
http://www.panspermia.org/rnaworld.htm

sesquiterpene cyclase (requires the plug-in called Chime - free access on the web)
http://srv2.lycoming.edu/~newman/courses/bio43598/cyclase/

terpene cyclases (a primer on the biosynthesis of terpenes)
http://sbl.salk.edu/noel/terpene_cyclases.html