

Evolving Reading Assignment List (and Problem Set and Exam Schedules)

Chem 8321/4321, Fall 2023

http://www1.chem.umn.edu/groups/hoye/teaching/Teaching_8321_4321_Fall_2023

Date Assigned	Source	Chapter/Pages Journal Citation	Topic(s)
12-8-23	Kürti and Czakó	282–283 196–197 398–399	Meisenheimer rearrangement Mizoroki-Heck reaction Schotten-Baumann reaction
12-8-23	Yoneda, R.; Sakamoto, Y.; Oketo, Y.; Harusawa, S.; Kurihara, T. Tetrahedron 1996, 52, 14563–14576.		An efficient synthesis of magallanesine using [1,2]-Meisenheimer rearrangement and Heck cyclization
12-4-23	Kürti and Czakó	https://en.wikipedia.org/wiki/Norrish_reaction 390–391 490–491	Norrish reaction (Type II) Saegusa-Ito oxidation [2.3]-Wittig rearrangement
12-4-23	Sugimura, N.; Paquette, L. A. J. Am. Chem. Soc. 1987, 109, 3017–3024.		Enantiospecific total synthesis of the sesquiterpene antibiotics (–)- punctatin A and (+)- punctatin D
12-1-23	Kürti and Czakó	292–293 322–323	Mislow-Evans Rearrangement Overman rearrangement
12-1-23	Hama, N.; Matsuda, T.; Chida, N. Org. Lett. 2009, 11, 2687-2690.		Total synthesis of (–)- agelastatin A : The application of a sequential sigmatropic rearrangement
11-15-23	Kürti and Czakó	46–47 60–61 286–287 302–303 478–479	Barton-McCombie deoxygenation reduction Birch reduction Diploar (Huisgen) cycloadditions Nagata hydrocyanation Weinreb ketone synthesis
11-15-23	Peese, K. M.; Gin, D. Y. J. Am. Chem. Soc. 2006, 128, 8734-8735.		Efficient synthetic access to the hetisine C20- diterpenoid alkaloids. A concise synthesis of nominine via oxidoisoquinolinium-1,3-dipolar and dienamine-Diels-Alder cycloadditions
11-3-23	Kürti and Czakó	140–141 10–12 380–381	Diels-Alder cycloaddition Alkene (olefin) metathesis Riley selenium dioxide oxidation
11-3-23	Nickel, A.; Maruyama, T.; Tang, H.; Murphy, P. D.; Greene, B.; Yusuff, N.; Wood, J. L. J. Am. Chem. Soc. 2004, 126, 16300–16301		Total synthesis of ingenol

10-27-23	<i>Organic Syntheses</i>	http://www.orgsyn.org/demo.aspx?prep=CV7P0168	(Schreiber) ozonolysis
10-27-23	Kürti and Czako	32–33 170–171 226–227 486–487	Baldwin's rules Finkelstein reaction Johnson-Claisen rearrangement Wittig Reaction
10-27-23	Johnson, W. S. Gravestock, M. B.; McCarry, B. E. J. Am. Chem. Soc. 1971, 93, 4332–4334		Acetylenic bond participation in biogenetic-like olefinic cyclizations. II. Synthesis of (±)- progesterone
10-23-23	Kürti and Czako	434–435 496–497	Stevens rearrangement Wolff-Kishner reduction
10-23-23	West, F. G.; Naidu, B. N. J. Am. Chem. Soc. 1994, 116, 8420–8421		Piperidines via ammonium ylide [1,2]-shifts: A concise, enantioselective route to (-)- epilupinine from proline ester
10-13-23	Kürti and Czako	66–67 162–163 212–213 500–501	Brown hydroboration reaction Evans asymmetric aldol reaction Horner Wadsworth Emmons reaction Yamaguchi esterification/lactonization
10-13-23	Hoffmann, R. W. Chem. Rev. 1989, 89, 1841–1860		Allylic 1,3-strain as a controlling factor in stereoselective transformations.
10-13-23	Fitch, D. M.; Evans, D. A. J. Org. Chem. 1997, 62, 454–455		Enantioselective synthesis of the elaiophyllin aglycon
10-2-23	Kürti and Czako	88–89 228–229 286–287 480–481	Claisen rearrangement Jones oxidation Michael addition reaction Wharton fragmentation
10-2-23	Burke, S. D.; Murtiashaw, W.; Saunders, J. O.; Dike, M. S. J. Am. Chem. Soc. 1982, 104, 872–874		A novel and efficient entry to (±)- quadtone
9-27-23	Kürti and Czako	100–101 406–407	Corey-Bakshi-Shibata reduction Sharpless asymmetric dihydroxylation
9-27-23	Yun, H.; Danishefsky, S. J. J. Org. Chem. 2003, 68, 4519–4522		“Straightforward synthesis of panaxytriol : an active component of red ginseng”
9-18-23	Kürti and Czako	86–87 450–451	Claisen condensation Swern oxidation
9-18-23	Feldman, K. S.; Mechem, C. C.; Nader, L. J. Am. Chem. Soc. 1982, 104, 4011		Total synthesis of (±)- pentacene
9-11-23	Kürti and Czako	484–485 116–117	Williamson Ether Synthesis Curtius Rearrangement

9-11-23	Zutter, U.; Iding, H.; Spurr, P.; Wirz, B. J. Org. Chem. 2008, 73, 4895-4902.		New, efficient synthesis of oseltamivir phosphate (Tamiflu) via enzymatic desymmetrization of a meso-1,3-cyclohexanedicarboxylic acid diester
9-6-23	Kürti and Czakó	140-141	Diels-Alder cycloaddition reaction
9-6-23	Wyvratt, M. J.; Paquette, L. A. Tetrahedron Lett. 1974, 15, 2433.		Domino Diels-Alder reactions. II. A four-step conversion of cyclopentadienide to triquinacene
9-6-23	Handout	(and posted on the website)	Stereochemical definitions
9-6-23	Anslyn & Dougherty	Chap 6	297–323 331–344
	http://uscibooks.com/Anslyn/AD06rt.pdf (or posted on the course website)		Stereochemistry

Problem Set Schedule (2023)

Date Assigned	Problem Set #	Date Due
Wed, Sep 6	1	Mon, Sep 11
Mon, Sep 11	2	Mon, Sep 18
Mon, Sep 18	3	Mon, Sep 25
Mon, Sep 25	4	Mon, Oct 2
Mon, Oct 2	5	Mon, Oct 9
Midterm Exam I (Wed, Oct 11, 6–8 pm, 331 Smith)		
Mon, Oct 16	6	Mon, Oct 23
Mon, Oct 23	7	Mon, Oct 30
Mon, Oct 30	8	Mon, Nov 6
Mon, Nov 6	9	Mon, Nov 13
Mon, Nov 13	10	Mon, Nov 20
Mon, Nov 20	11	Mon, Nov 27
Midterm Exam II (Wed, Nov 29, 6–8 pm, 331 Smith)		
Mon, Dec 4	12	Mon, Dec 11
Final Exam (Wed, Dec 20, 1:30–4:30 pm, 231 Smith)		

Exam Schedule (Fall, 2023)

Midterm I	Wed, Oct 11, 2023	6–8 pm (331 Smith)
Midterm II	Wed, Nov 29, 2023	6–8 pm (331 Smith)
Final Exam	Wed, Dec 20, 2023	1:30–4:30 pm (231 Smith)
