

Chemistry 6942 Advanced Organic 2

Schedule Spring 2018

Class Period	Date	Topic	Reading	Homework
1	1/14	Crash course in basics		
2	1/16	Chiral Auxiliaries 1: RAMP/SAMP	Enders, Eichenauer <i>Angew. Chem. Int. Ed.</i> 1976, <i>15</i>, 549	
3	1/21	Chiral Auxiliaries 2: Evans	Evans, Bartroli, Shih <i>J. Am. Chem. Soc.</i> 1981, <i>103</i>, 2127 Evans, Ennis, Mathre <i>J. Am. Chem. Soc.</i> 1982, <i>104</i>, 1737	
4	1/23	Chiral Auxiliaries 3: Sulfur	Posner <i>Acc. Chem. Res.</i> 1987, <i>20</i>, 72-78 Ellman, Owens, Tang <i>Acc. Chem. Res.</i> 2002, <i>35</i>, 984	HW 1 assigned
5	1/28	More Sulfur and intro to catalysis	MacMillan, D. W. C. <i>Nature</i> 2008, <i>455</i>, 304	HW1 Due
6	1/30	Hajos-Parrish Reaction	Hajos, Parrish <i>J. Org. Chem.</i> 1974, <i>39</i>, 1615	
7	2/4	Enamine Catalysis	List, Lerner, Barbas III. <i>J. Am. Chem. Soc.</i>, 2000, 2395 List <i>J. Am. Chem. Soc.</i> 2000, <i>122</i>, 9336 Brochu, Brown, MacMillan <i>J. Am. Chem. Soc.</i> 2004, <i>126</i>, 4108 Marigo, Fielenbach, Braunton, Kjaersgaard, Jorgensen <i>Angew. Chem. Int. Ed.</i> 2005, <i>44</i>, 3703 Austin, MacMillan. <i>J. Am. Chem. Soc.</i> 2002, <i>124</i>, 1172	
8	2/6	Imminium Catalysis	Ouellet, Tuttle, MacMillan. <i>J. Am. Chem. Soc.</i>, 2005, <i>127</i>, 32 Huang, Walji, Larsen, MacMillan <i>J. Am. Chem. Soc.</i> 2005, <i>127</i>, 15051	HW 2 assigned
9	2/11	Imminium part 2 and ketenes Sample Lit Presentation	Taggi, Hafez, Wack, Young, Ferraris, Lectka. <i>J. Am. Chem. Soc.</i> 2002, <i>124</i>, 6626	HW 2 Due
10	2/13	EXAM 1		

11	2/18	Acyl anion equiv. historical	Breslow. <i>J. Am. Chem. Soc.</i> 1958, <i>80</i>, 3719. Arduengo III, Harlow, Kline. <i>J. Am. Chem. Soc.</i> 1991, <i>113</i>, 361 Arduengo III, Dias, Harlow, Kline. <i>J. Am. Chem. Soc.</i> 1992, <i>114</i>, 5530	
12	2/20	Lit 1A		
13	2/25	NHC's	Marion, Diez-Gonzalez, Nolan. <i>Angew. Chem. Int. Ed.</i> 2007, <i>46</i>, 2988.	
14	2/27	Lit 1B		HW 3 assigned
15	3/3	NHC's 2 : homo enolates		HW 3 Due
16	3/5	Lit 2A		
	3/10	No Class Spring Break		
	3/12	No Class Spring Break		
17	3/17	Exam 2		
18	3/19	Lit 2B		
19	3/24	Non-covalent catalysis (biochemical influence)	Taylor, Jacobsen <i>Angew. Chem. Int. Ed.</i> 2006, 45, 1520	HW4 assigned
20	3/26	No Class		
21	3/31	HBD 1	Vachal, Jacobsen <i>J. Am. Chem. Soc.</i> 2002, <i>124</i>, 10012	HW4 Due
22	4/2	Lit 3A		
23	4/7	HBD 2: Bifunctional AND Chiral Acids 1	Unni, Takenaka, Yamamoto, Rawal <i>J. Am. Chem. Soc.</i> 2005, 127, 1336	
24	4/9	Lit 3B		
25	4/14	Chiral Acids 2	Parmar, Sugiono, Raja, Rueping <i>Chem. Rev.</i> 2014, <i>114</i>, 9047 note this article is over 100 pages. you don't have to read close to that. it is a good reference for our discussion on Bronstead acid catalysis.	
26	4/16	Lit 4A		HW 5 assigned
27	4/21	Frustrated Lewis Pairs		HW 5 due
28	4/23	Lit 4B		
29	4/28	Hexacyclinol		
30	4/30	Exam 3		

Schedule is subject to change