

FLUORINE
CHEMISTRY
for
ORGANIC
CHEMISTS

PROBLEMS AND SOLUTIONS

MILOŠ HUDLICKÝ

Fluorine Chemistry for Organic Chemists

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for Organic Chemists**
Problems and Solutions

MILOŠ HUDLICKÝ

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To my dearest wife Alena
and to our children, Tomáš and Eva.

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The chemistry of fluorine and its compounds has long lagged behind the chemistry of the other three halogens. While hydrochloric acid was well known in antiquity, hydrogen fluoride was first described by Scheele only in 1771, and fluorine was first prepared by H. Moissan in 1886. Organic fluorine compounds were studied systematically by F. Swarts only at the end of the last century, and the first industrial application of fluorine compounds came from the discovery of fluorinated refrigerants by A. L. Henne and T. Midgley around 1930.

The initial delay in the development of the chemistry of fluorine and its compounds compared with the chemistry of other halogens was soon erased by very intensive work in fluorine chemistry. Hundreds of thousands of fluorine compounds have been prepared over the last century, and the number of fluorine chemistry monographs exceeds by many times that of other halogens.

Some of the fluorinated compounds possess unique properties. Although most reactions of fluorine compounds resemble those of chlorine, bromine, and iodine, in many cases fluorinated compounds show peculiar dissimilarities. Such dissimilarities are the subject of this volume.

This book consists of two parts—Problems and Solutions. Each part is further subdivided according to the types of reactions. Entries in the Contents feature two page references, separated by a slash. The first page number refers to the page on which the problem is posed; the second page number refers to the page on which the solution to the problem is described.

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Part I. Problems

1 Warmup for Inorganic Chemists 3 / 41

1. Safety of Hydrogen Fluoride Cylinders 3 / 41
2. Bond Dissociation Energy of the Molecule of Fluorine 3 / 42

2 Introduction of Fluorine 4 / 42

3. Addition of Fluorine to Diphenylethylenes 4 / 42
4. Rearrangement in the Replacement of Hydroxyl by Fluorine in Saccharides 4 / 44
5. Reaction of β -Dicarbonyl Compounds with Diethylaminosulfur Trifluoride 5 / 45

3 Reductions 6 / 46

6. Reduction of Unsaturated Fluorinated Compounds 6 / 46
7. Reduction of 3-Chlorotetrafluoropyridine 6 / 47
8. Reaction of Isopropyl Alcohol with 2-Fluorocyclohexanone 6 / 48

4 Oxidations 7 / 49

9. Oxidation of Chlorotrifluoroethylene with Oxygen 7 / 49
10. Reaction of Perfluoro-*o*-phenylenediamine with Lead Tetraacetate 7 / 49
11. Reaction of Fluorinated Aromatic Diamines with Nitrous Acid 8 / 50

5 Preparation of Halogen Derivatives 8 / 51

12. Addition of Iodine Fluoride to Chlorotrifluoroethylene 8 / 51
13. Addition of Hydrogen Bromide to Chlorotrifluoroethylene 8 / 52
14. Addition of Hydrogen Chloride to 3,3,3-Trifluoropropene 9 / 53
15. Addition of Hydrogen Halides to Perfluoropropene 9 / 53
16. Reaction of Perfluoroalkenes with Metal Fluorides 9 / 54
17. Chlorination of *o*-Fluorotoluene 9 / 55
18. Chlorination of 3,4-Difluoronitrobenzene 10 / 56
19. Reaction of Fluoropentanitrobenzene with Hydrogen Chloride 10 / 56
20. Reaction of 1,1-Difluoroethylene with Trifluoroacetyl Hypochlorite 10 / 57
21. Reaction of Pentafluorophenol with *tert*-Butyl Hypobromite 11 / 57
22. Reaction of Perfluorocycloalkenes with Aluminum Halides 11 / 58
23. Reaction of Perfluoro-2-butyltetrahydrofuran with Aluminum Chloride 11 / 58
24. Reaction of Perfluorotetrahydropyran with Aluminum Chloride 12 / 58

6 Nitration 12 / 59

25. Nitration of *o*-Fluorotoluene 12 / 59

7 Reactions of Sulfur Trioxide 12 / 60

26. Reaction of Sulfur Trioxide with Enol Ethers 12 / 60
27. Reaction of Sulfur Trioxide with
Perfluoro-*tert*-butylacetylene 13 / 60
28. Reaction of Sulfur Trioxide with Perfluoroisobutylene 13 / 61
29. Reaction of Sulfur Trioxide with Perfluoropropylene
Oxide 13 / 62
30. Reaction of Sulfur Trioxide with Perfluorotoluene 13 / 62

8 Acid-Catalyzed Additions and Substitutions 14 / 62

31. Reaction of Benzene with 1-Chloro-2-fluoropropane 14 / 62
32. Reaction of Benzene with
2-Chloro-1,1,1-trifluoropropane 14 / 63
33. Reaction of Benzene with 3,3,3-Trifluoropropene 14 / 64
34. Reaction of 1-Phenylperfluoropropene with Aluminum
Chloride 14 / 64

9 Hydrolyses 15 / 65

35. Hydrolysis of Benzyl Halides 15 / 65
36. Hydrolysis of ω -Fluorocarboxylic Acids and
Their Nitriles 15 / 65
37. Hydrolysis of Perfluorocycloalkenes 16 / 66
38. Reaction of 3,5-Dichlorotrifluoropyridine with Potassium
Hydroxide 16 / 67
39. Reaction of 2,5-bis(Trifluoromethyl)aniline with Sodium
Hydroxide 16 / 68
40. Reaction of Heptafluorobutyraldehyde Hydrate with Potassium
Hydroxide 17 / 69
41. Reaction of Pentafluoroethyl Iodide with Potassium Hydroxide and
Water 17 / 69
42. Hydrolysis of Unsaturated Fluorinated Compounds 17 / 70
43. Hydrolysis of Geminal Difluorides 17 / 71
44. Hydrolysis of Difluoromethylene Group in Enol Ethers 18 / 71
45. Reaction of Alkalis with Fluorinated Cyclopropanes 18 / 72
46. Product of Treatment of *p*-Trifluoromethylphenol with Potassium
Hydroxide 18 / 72

10 Alkylations 19 / 73

47. Reaction of 1-Chloro-3,3,4,4-tetrafluorocyclobutene with
Potassium Hydroxide and Ethanol 19 / 73
48. Reaction of 1-Bromo-2-chlorotetrafluorocyclobutene with
Potassium Hydroxide 19 / 74
49. Reaction between 1-Chloro-2-fluoroethane and Ethyl
Acetoacetate 19 / 75

50. Reaction of Pentafluorophenol with Chlorodifluoromethane and Sodium Hydroxide 20 / 75
51. Reaction of 1,4-Dibromohexafluoro-2-butene with Sodium Ethoxide 20 / 76
52. Reaction of Perfluoro-3,4-dimethyl-3-hexene with Methanol 20 / 76
53. Reaction of Chlorotrifluoroethylene with Sodium Ethoxide 20 / 77
54. Reaction of Perfluoro- γ -butyrolactone with Perfluoropropylene Oxide 21 / 77
55. Reaction of Alkali Thiophenoxides with Polyfluorohalomethanes 21 / 78
56. Reaction of Perfluorodecalin with Sodium Thiophenoxide 21 / 79
57. Reaction of Perfluorocyclobutene with Hydrazine 22 / 80
58. Reaction of 1,2,3,5-tetrakis(Trifluoromethyl)benzene with Ammonia 22 / 81
59. Reaction of Perfluoroisobutylene with Dimethyl Malonate 22 / 82
60. Reaction of Perfluorobenzotrichloride and Chlorodifluoromethane 22 / 83
61. Reaction of Enamines with Trifluoromethanesulfonyl Chloride 23 / 83
62. Reaction of 1,1-Dichlorodifluoroethylene with Methanol 23 / 84
63. Reaction of Chlorotrifluoroethylene with Aniline 23 / 85
64. Reaction of Chlorotrifluoroethylene with Dimethylamine 23 / 85
65. Reaction of Alcohols with Perfluoroalkenes 24 / 86
66. Reaction of Fluoroalkenes with Azides 24 / 87

11 Arylations 24 / 88

67. Reaction of 1,2-Difluorotetrachlorobenzene with Sodium Methoxide 24 / 88
68. Reaction of 2,4-Dinitrohalobenzenes with Sodium Methoxide 25 / 89
69. Reaction of Fluoropentachlorobenzene with Potassium *p*-Methoxyphenoxide 25 / 90
70. Reaction of Perfluoronaphthalene with Sodium Alkoxides or Aryloxides 25 / 90
71. Reaction of Perfluoropyridine with Methanol 26 / 91
72. Arylation at Sulfur 26 / 91

12 Acylations 26 / 92

73. Acylations with Mixed Anhydrides of Trifluoroacetic Acid 26 / 92

13 Aldol-Type Condensations 27 / 93

74. Reaction of 1,1,1-Trifluoroacetone, Formaldehyde, and Piperidine 27 / 93

75. Reaction of α,α,α -Trifluoroacetophenone with Tributylphosphine 27 / 93
76. Reaction of Dibromodifluoromethane and tris(Dimethylamino)phosphine with Fluorinated Ketones 27 / 94
77. Reactions of Phosphorus Ylides with Fluorinated Nitriles 28 / 95
78. Reaction of tris(Trifluoromethyl)methane with Acrylonitrile 28 / 95

14 Organometallic Syntheses 28 / 95

79. Reaction of Ethyl Chlorofluoroacetate with Grignard Reagents 28 / 95
80. Reaction of 3-Chloropentafluoropropene with Phenylmagnesium Bromide 29 / 96
81. Reaction of 1,2-Dichlorohexafluorocyclopentene with Ethylmagnesium Bromide 29 / 97
82. Reaction of 1,2-Dichloro-1-fluoroethylene with Butyllithium and Acetone 29 / 98
83. Reaction of Trifluoroethylene with Butyllithium and Acetone 30 / 98
84. Reaction of 1-Chloro-1,2-difluoroethylene with Butyllithium and Carbon Dioxide 30 / 98
85. Reaction of Aldehydes with 1,1,1-Trichlorotrifluoroethane and Zinc in the Presence of Acetic Anhydride 30 / 99
86. Reaction of Aldehydes with 1,1,1-Trichlorotrifluoroethane and Zinc in the Presence of Aluminum Chloride 30 / 99
87. Reaction of Dibromodifluoromethane and 4-Chloro-3-nitrobenzotrifluoride with Copper 31 / 100

15 Additions 31 / 101

88. Reaction of 2-Aminoethanol with Ethyl 4,4,4-Trifluoro-3-trifluoromethyl-2-butenolate 31 / 101
89. Reaction of 1,1-Dichlorodifluoroethylene with 1,3-Butadiene 31 / 102
90. Reaction of 1,2-Dichlorodifluoroethylene with Perfluoropropylene Oxide 32 / 103
91. Reaction between Perfluorovinylsulfur Pentafluoride and 1,3-Butadiene 32 / 103
92. Reaction between Trifluoroethylene and 1,3-Butadiene 32 / 103
93. Reaction between Hexafluoroacetone Azine and Acetylene 32 / 104
94. Reaction of tris(*tert*-Butyl)azete and Trifluoroacetonitrile 33 / 104
95. Dimerization of Perfluoro-1,3-butadiene 33 / 105

16 Eliminations 33 / 105

96. Reaction of Alkalis with Fluorinated Cyclopropanes 33 / 105
97. Reaction of Diethyl *threo*-2-Bromo-3-fluorosuccinate with Potassium Acetate 34 / 106
98. Reaction of 1-Bromo-2-fluorocyclohexanes with Bases 34 / 107

17 Rearrangements 35 / 108

- 99. Reaction of Fluorohaloethanes with Aluminum Chloride 35 / 108
- 100. Treatment of 3-Chloropentafluoropropene with Antimony Halides 35 / 109
- 101. Reaction of Trifluoronitrosomethane with Ammonia 35 / 109
- 102. The Hofmann Degradation of Perfluorobutyramide 35 / 109
- 103. Irradiation of hexakis(Trifluoromethyl)benzene 36 / 110
- 104. Reaction of 2-Bromoperfluoronaphthalene with Antimony Pentafluoride 36 / 110
- 105. Claisen Rearrangement of Fluoroaromatic Acetylenic Ethers 37 / 111

Part II. Solutions

REFERENCES	113
AUTHOR INDEX	118
SUBJECT INDEX	121

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