

CONTENTS

1 Introduction	1
2 Alkanes or Paraffin Hydrocarbons	11
3 Alkanes or Olefin Hydrocarbons	30
4 Alkynes or Acetylene Hydrocarbons	57
5 Dienes or Diolefins	71
6 Alicyclic Hydrocarbons	80
7 Aromatic Hydrocarbons	106
8 Arylaliphatic Hydrocarbons and Diphenyl	131
9 Unsubstituted Heterocyclic Compounds	143
10 Aliphatic Halogen Compounds	160
11 Halogen Derivatives of Aromatic Hydrocarbons	187
12 Hydroxy Substituted Derivatives of Aliphatic Hydrocarbons	207
13 Dihydric and Polyhydric Aliphatic Alcohols	240
14 Aromatic Alcohols and Alicyclic Alcohols	256
15 Hydroxy Derivatives of Aromatic Hydrocarbons	265
16 Thioethers or Dialkyl Sulfides	309
17 Ethers	289
18 Thioethers or Dialkyl Sulfides	309
19 Aldehydes and Ketones	313
20 Carbohydrates	362
21 α,β -Unsaturated Aldehydes and Ketones	400
22 Quinones	415
23 Ketenes	427
24 Dialdehydes and Diketones	433
25 Saturated Aliphatic Monobasic Acids	445
26 Cyclic Monocarboxylic Acids	464
27 Unsaturated Aliphatic Monobasic Acids	475
28 Aromatic Sulfonic Acids and Sulfinic Acids	492
29 Acyl Halides and Acid Anhydrides	499
30 Monocarboxamides, Sulfonamides and Acid Hydrazides	511
31 Esters of Monobasic Organic Acids	525
32 Esters of Glycerol: Fats, Fatty Oils, and Related Compounds	541
33 Esters of Inorganic Acids	547
34 Aliphatic Amines and Quaternary Ammonium Compounds	552
35 Arylalkylamines	587
36 Aromatic Amines	594

37 Aromatic Diazonium Compounds	621
38 Halogen- and Hydroxy-Substituted Acids	637
39 Aldo and Keto Acids	657
40 Amino Acids and Proteins	669
41 Dibasic Acids	701
42 Derivatives of Carbonic Acid	725
43 Cyanogen and Related Compounds	737
44 Natural Products	750
45 Organometallic Compounds	784
46 Metal Carbonyls and Aromatic Metal Complexes	800
47 Physical Methods of Determining the Nature of Bonds and Structures of Organic Molecules	808
Index	835