

INDEX

A

Acetonitrile, 57, 69, 79, 279, 295

Apparent molal volume, 49, 295-96

Association constant, 169, 171, 184-85, 194-201, 203, 206, 209-11, 213, 218, 219-20

α -cyclodextrin (α -CD, α -CyD) 76-7, 80, 155, 188-96, 198-99, 209, 213, 215, 221-19, 221-29, 231-33, 253-58, 262

Anti-bacterial study/ effect 156, 178, 180, 273

Anti-diabetic 25, 33, 186-87, 212-13

Anti oxidant 235, 253

B

β -cyclodextrin, 75, 77-78, 80, 93-94, 107, 112-15, 117, 121, 126-127, 155-56, 181-82, 185, 192-95, 231, 254, 264-65,

Binary solution, 80

Biologically active molecules, 21, 25, 32, 72, 93, 265

1-butyl-4-methylpyridinium chloride, 72, 94, 95

1-butyl-1-methylpyrrolidinium tetrafluoroborate, 73

C

Conductance, 23, 29, 35, 56-7, 64, 71, 84-5, 95-6, 100-105, 116-17, 132, 134, 145-46, 148, 157, 159, 167, 179-80, 194, 209, 215-16, 235, 253, 266

Conductivity measurement, 30, 37, 54, 84, 91, 94, 104, 115, 193, 213, 254, 256, 259, 267

Covalent bonding, 45

Cyclodextrin, 21-22, 25, 33-34, 72, 75, 79, 88, 93-94, 121, 171, 173, 180, 187, 189, 192, 200, 213, 253-54, 257, 259-260, 263, 266-267

D

Debye-Hückel theory, 54,

Density measurement, 46, 81

Designer solvents, 21,

Dipole-dipole forces, 42,

Dynamic light scattering (DLS) 27, 96, 112-15, 128, 135, 152, 154, 156, 159, 165, 179, 191, 206, 266,

Dichloromethane, 95, 132,

E

Electrolytes, 24, 35, 37, 47-8 53-4
64, 72, 79, 96, 239

Electrostatic interaction, 57

Electrostriction, 46

Enthalpy, 37, 46, 24-42, 173,215

Entropy, 37, 46, 62-3 173,215 241-
42

ESI-MS 94, 188, 198, 222, 266

Ethanol, 57, 69, 85, 95, 157, 192,
198,

F

Falkenhagen-vernon equation, 55,

Fluorescence, 25-6, 94-6, 101, 103,
105-7, 115, 132, 134, 148, 153,
159, 170, 177, 180, 185, 265-66

Formation Constant, 124,215

FTIR , 24-6, 85, 94-5, 97, 115-
16,124, 134-36, 138, 153, 156,
158, 160-61, 180-81, 188, 198-200,
221, 265-66

G

Gibbs energy, 46

H

H-bonding, 199, 239

Hydrophilic, 76,156, 187, 253, 260

Hydrophobic, 22-3, 46, 61, 76, 93,
105, 131, 169, 186-87, 193,200,
206, 253-54, 259-60,

Hydrophobic interactions, 23

Hydroxypropyl- β - cyclodextrin, 155

I

Inclusion complexes/ compounds,
21-22,25-28,33-35, 75-76,88,93-95,
104-109,112-115,126-128,152,
155-156,162-163,167,171-
178,180, 186-89, 191-94,121,200-
01, 209-12, 221-27,231-33,253-
254, 258-260, 265-267

Industrial applications, 21-2

Intermolecular forces, 22-4, 40-2,
234, 241

Intermolecular interaction, 22-4,
40-1, 45, 50

Ionic liquids, 21-2, 25, 30-3, 79, 93,
131,155, 253, 265

Ionic mobility, 21, 62

Ionic liquid based surfactants, 25,
32, 93, 104, 131, 154, 265 -67

-
- J**
173,178, 180, 182,188, 190, 200-201,203, 222, 224-227, 253-254, 258, 260, 265-267
- Jones-dole equation, 55, 60, 239
- L**
- Lattice energy, 42
- Limiting apparent molar volumes, 241-42
- M**
- Mass measurement, 80
- Masson equation,
- Melting point, 21, 30, 52, 68-78, 91, 131, 144-45, 151,153, 157, 237, 266
- Methanol, 57, 68-9, 79
- 4-Methylpyridine, 74, 157, 181
- N**
- Neoteric solvent, 72-3
- NOESY, 95, 108-09, 112, 134, 188, 200, 203, 266
- Non-covalent interactions, 21, 265-266
- NMR, 24-25, 27, 87, 94-95, 97,108-09, 112,115 ,125-28, 131, 134, 138-144, 153, 156, 158, 161-163,
- O**
- Optical data, 64
- Organic solvent, 21, 30, 49, 57-58, 61, 95, 98, 131
- P**
- Partial molar volumes, 46-7, 49,
- Pharmaceutical, 25, 75-76, 79, 155, 186-87, 234
- Physicochemical properties, 21-3, 34, 46, 93, 98, 145, 164
- Pitzer equation, 47, 49
- POM, 151-52, 154, 266
- Protic solvent, 69
- R**
- Redlich-kister expression, 66
- Reference electrolyte, 58
- Relative permittivity, 135
- Repulsive interaction, 126
- Room temperature ionic liquid, 30

S

Solvation, 60-3, 239, 267

Solvation consequence, 23, 25, 267,

Surface Tension, 23, 25, 86, 94, 96, 101-103, 106, 107, 115, 120, 134, 146-48, 159, 172-173, 179-80, 191-193, 213-214, 253-55, 257, 259, 260, 262, 265-267

Scanning electron microscopy, (SEM) 27, 91-2, 156, 160, 175-77, 180, 265,

Size, 27, 34, 39-41, 47-48, 51, 61, 78, 81, 94, 96, 99, 112-15, 129, 131, 152-54,

Sodium dodecyl sulfate 73-74, 115, 132

T

Temperature controller, 82,

Tetrabutylammonium tetrabutylborate, 58

Thermodynamic properties, 22-3, 40-1, 56, 65

Thermostatic water bath, 82, 85

Thermodynamic parameters, 22, 37, 46, 94, 156, 169-70,

Trigonelline hydrochloride/
Trigonelline, 25, 75, 80, 187-89, 203, 206, 212, 213, 231

Transmission electron microscopy (TEM) 28, 92, 94, 96, 112-15, 152, 191, 209-11, 233, 265, 266,

U

UV-visible, 25-6, 95, 107, 134, 124, 159, 190, 216

V

van der waal forces, 239

Viscosity measurement, 23-4, 59, 64, 81

Viscosity, 23-24, 26, 28, 35, 40, 50-53, 55, 59-64, 70-1, 81, 234, 236, 239-42, 244-45, 247, 250, 265

Viscous flow, 50-51, 61-3, 240-241

W

Water, 90, 94-5, 96, 98-9, 128, 132-33, 156-57, 159, 163-65, 173, 187, 190-92, 198, 212, 235-36, 253-254, 260

X

X-ray diffraction 89, 210, 231,