

常用有机溶剂的物理常数

| 溶剂                                     | mp   | bp  | $D_4^{20}$ | $n_D^{20}$ | $\epsilon$ | $R_D$ | m    |
|----------------------------------------|------|-----|------------|------------|------------|-------|------|
| Acetic acid 乙酸                         | 17   | 118 | 1.049      | 1.3716     | 6.15       | 12.9  | 1.68 |
| Acetone 丙酮                             | -95  | 56  | 0.788      | 1.3587     | 20.7       | 16.2  | 2.85 |
| Acetonitrile 乙腈                        | -44  | 82  | 0.782      | 1.3441     | 37.5       | 11.1  | 3.45 |
| Anisole 苯甲醚                            | -3   | 154 | 0.994      | 1.5170     | 4.33       | 33    | 1.38 |
| Benzene 苯                              | 5    | 80  | 0.879      | 1.5011     | 2.27       | 26.2  | 0.00 |
| Bromobenzene 溴苯                        | -31  | 156 | 1.495      | 1.5580     | 5.17       | 33.7  | 1.55 |
| Carbon disulfide 二硫化碳                  | -112 | 46  | 1.274      | 1.6295     | 2.6        | 21.3  | 0.00 |
| Carbon tetrachloride 四氯化碳              | -23  | 77  | 1.594      | 1.4601     | 2.24       | 25.8  | 0.00 |
| Chlorobenzene 氯苯                       | -46  | 132 | 1.106      | 1.5248     | 5.62       | 31.2  | 1.54 |
| Chloroform 氯仿                          | -64  | 61  | 1.489      | 1.4458     | 4.81       | 21    | 1.15 |
| Cyclohexane 环己烷                        | 6    | 81  | 0.778      | 1.4262     | 2.02       | 27.7  | 0.00 |
| Dibutyl ether 丁醚                       | -98  | 142 | 0.769      | 1.3992     | 3.1        | 40.8  | 1.18 |
| o - Dichlorobenzene 邻二氯苯               | -17  | 181 | 1.306      | 1.5514     | 9.93       | 35.9  | 2.27 |
| 1,2-Dichloroethane 1, 2-二氯乙烷           | -36  | 84  | 1.253      | 1.4448     | 10.36      | 21    | 1.86 |
| Dichloromethane 二氯乙烷                   | -95  | 40  | 1.326      | 1.4241     | 8.93       | 16    | 1.55 |
| Diethylamine 二乙胺                       | -50  | 56  | 0.707      | 1.3864     | 3.6        | 24.3  | 0.92 |
| Diethyl ether 乙醚                       | -117 | 35  | 0.713      | 1.3524     | 4.33       | 22.1  | 1.30 |
| 1,2-Dimethoxyethane 1, 2-二甲氧基乙烷        | -68  | 85  | 0.863      | 1.3796     | 7.2        | 24.1  | 1.71 |
| N,N - Dimethylacetamide<br>N, N-二甲基乙酰胺 | -20  | 166 | 0.937      | 1.4384     | 37.8       | 24.2  | 3.72 |
| N,N - Dimethylformamide<br>N, N-二甲基甲酰胺 | -60  | 152 | 0.945      | 1.4305     | 36.7       | 19.9  | 3.86 |
| Dimethyl sulfoxide二甲<br>基亚砷            | 19   | 189 | 1.096      | 1.4783     | 46.7       | 20.1  | 3.90 |
| 1,4-Dioxane 1, 4-二氧六<br>环              | 12   | 101 | 1.034      | 1.4224     | 2.25       | 21.6  | 0.45 |
| Ethanol 乙醇                             | -114 | 78  | 0.789      | 1.3614     | 24.5       | 12.8  | 1.69 |
| Ethyl acetate 乙酸乙酯                     | -84  | 77  | 0.901      | 1.3724     | 6.02       | 22.3  | 1.88 |

|                                     |      |      |       |        |       |      |      |
|-------------------------------------|------|------|-------|--------|-------|------|------|
| Ethyl benzoate 苯甲酸乙酯                | -35  | 213  | 1.050 | 1.5052 | 6.02  | 42.5 | 2.00 |
| Formamide 甲酰胺                       | 3    | 211  | 1.133 | 1.4475 | 111.0 | 10.6 | 3.37 |
| Hexamethylphosphoramide             | 7    | 235  | 1.027 | 1.4588 | 30.0  | 47.7 | 5.54 |
| Isopropyl alcohol 异丙醇               | -90  | 82   | 0.786 | 1.3772 | 17.9  | 17.5 | 1.66 |
| isopropyl ether 异丙醚                 | -60  | 68   |       | 1.36   |       |      |      |
| Methanol 甲醇                         | -98  | 65   | 0.791 | 1.3284 | 32.7  | 8.2  | 1.70 |
| 2-Methyl-2-propanol 2-甲基-2-丙醇       | 26   | 82   | 0.786 | 1.3877 | 10.9  | 22.2 | 1.66 |
| Nitrobenzene 硝基苯                    | 6    | 211  | 1.204 | 1.5562 | 34.82 | 32.7 | 4.02 |
| Nitromethane 硝基甲烷                   | -28  | 101  | 1.137 | 1.3817 | 35.87 | 12.5 | 3.54 |
| Pyridine 吡啶                         | -42  | 115  | 0.983 | 1.5102 | 12.4  | 24.1 | 2.37 |
| tert-butyl alcohol 叔丁醇              | 25.5 | 82.5 |       | 1.3878 |       |      |      |
| Tetrahydrofuran 四氢呋喃                | -109 | 66   | 0.888 | 1.4072 | 7.58  | 19.9 | 1.75 |
| Toluene 甲苯                          | -95  | 111  | 0.867 | 1.4969 | 2.38  | 31.1 | 0.43 |
| Trichloroethylene 三氯乙烯              | -86  | 87   | 1.465 | 1.4767 | 3.4   | 25.5 | 0.81 |
| Triethylamine 三乙胺                   | -115 | 90   | 0.726 | 1.4010 | 2.42  | 33.1 | 0.87 |
| Trifluoroacetic acid 三氟乙酸           | -15  | 72   | 1.489 | 1.2850 | 8.55  | 13.7 | 2.26 |
| 2,2,2-Trifluoroethanol 2, 2, 2-三氟乙醇 | -44  | 77   | 1.384 | 1.2910 | 8.55  | 12.4 | 2.52 |
| Water 水                             | 0    | 100  | 0.998 | 1.3330 | 80.1  | 3.7  | 1.82 |
| o -Xylene 邻二甲苯                      | -25  | 144  | 0.880 | 1.5054 | 2.57  | 35.8 | 0.62 |

mp 熔点 bp 沸点 D 密度  $n_D$  折射率

$\epsilon$  介电常数  $R_D$  摩尔折射率  $\mu$  偶极矩