

## amides

1. Derivatives of *oxoacids*  $R_lE(=O)l(OH)_m$  ( $l \neq 0$ ) in which an acidic hydroxy group has been replaced by an amino or substituted amino group. Chalcogen replacement analogues are called thio-, seleno- and telluro-amides. Compounds having one, two or three acyl groups on a given nitrogen are generically included and may be designated as primary, secondary and tertiary amides, respectively, e.g.  $\text{PhC}(=\text{O})\text{NH}_2$  benzamide,  $\text{CH}_3\text{S}(=\text{O})_2\text{NMe}_2$  *N,N*-dimethylmethanesulfonamide,  $[\text{RC}(=\text{O})]_2\text{NH}$  secondary amides (see *imides*),  $[\text{RC}(=\text{O})]_3\text{N}$  tertiary amides,  $\text{PhP}(=\text{O})(\text{OH})\text{NH}_2$  phenylphosphonamidic acid.

Notes:

i. Amides with  $\text{NH}_2$ ,  $\text{NHR}$  and  $\text{NR}_2$  groups should not be distinguished by means of the terms primary, secondary and tertiary.

ii. Derivatives of certain acidic compounds  $R_nE(\text{OH})_m$ , where E is not carbon (e.g. *sulfenic acids*,  $\text{RSOH}$ , *phosphinous acids*,  $\text{R}_2\text{POH}$ ) having the structure  $R_nE(\text{NR}_2)_m$  may be named as amides but do not belong to the class amides proper, e.g.  $\text{CH}_3\text{CH}_2\text{SNH}_2$  ethanesulfenamide or ethylsulfanylamine.

2. The term applies also to metal derivatives of ammonia and amines, in which a cation replaces a hydrogen atom on nitrogen. Such compounds are also called azanides, e.g.  $\text{LiN}(\text{Pr}^i)_2$  lithium diisopropylamide, synonym lithium diisopropylazanide.

See also *carboxamides*, *lactams*, *peptides*, *phosphoramides*, *sulfonamides*.

1995, 67, 1315; see also 1993, 65, 1357