Copy of a printed table referenced as "Wallwork H-bond radii"

Contributors

Fuller, Watson, 1935-

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Hydrogen-bond radii

(Less-well-established values in parentheses)

Donor groups		Acceptor groups					
	(Å)		(Å)		(Å)		(Å)
NH_n	1·55	N^-	(1·52)	O^-	1·43	F^-	(1·35)
NH_n^+	1·41	N	1·51	O	1·40	Cl^-	1·79
OH_n	1·30	NH_n	1·59	OH_n	1·48	Br^-	1·98
		NH_n^+	(1·68)				

used to predict the acceptor radii for other atoms, e.g. sulphur might be expected to have a value of about 1·85 Å, or possibly less in view of shorter van der Waals radii for sulphur adopted by some authors. Eighteen $NH_n \cdots S$ contacts which might be hydrogen bonds have been found in the literature. They range in length from 3·23 to 3·51 Å and have a mean value of 3·40 Å, which is the distance expected for hydrogen bonds of this type if the acceptor radius for sulphur is 1·85 Å. Five of these distances—3·26