

	a2a^{down}			a2a^{down} (route b)			a2a^{down} (route c)			a2a^{up} (route a)			a2a^{up} (route b)			a2a^{up} (route c)		
	<i>A</i> _{iso}	<i>A</i> _{aniso}	Angle	<i>A</i> _{iso}	<i>A</i> _{aniso}	Angle	<i>A</i> _{iso}	<i>A</i> _{aniso}	Angle	<i>A</i> _{iso}	<i>A</i> _{aniso}	Angle	<i>A</i> _{iso}	<i>A</i> _{aniso}	Angle	<i>A</i> _{iso}	<i>A</i> _{aniso}	Angle
C1	214.1	-63.7	28	231.5	-58.5	80	230.4	-60.6	89	184.7	-67.3	26	227.2	-55.0	82	234.1	-58.0	72
		-62.3	59		-57.8	5		-59.9	6		-66.1	59		-54.1	22		-56.9	27
		126.0	13		116.3	12		120.5	15		133.5	20		109.1	28		114.8	26
H α	50.1	-4.8	21	42.3	-4.7	23	51.3	-4.5	25	40.0	-6.2	87	17.1	-6.2	88	23.5	-6.5	85
		-3.1	22		-3.2	26		-3.0	28		-4.2	88		-3.7	89		-4.0	81
		7.9	7		7.9	14		7.5	13		10.3	21		9.8	19		10.5	20
H(O)	43.4	-11.0	10		-7.0	69		-6.6	43		-6.7	13		-7.1	75		-8.0	42
		-6.2	10		-5.4	28	29.1	-3.9	43	96.8	-5.8	25	-1.3	-5.0	32	4.0	-5.6	45
		17.2	5		12.4	68		10.5	4		12.5	23		12.1	78		13.6	18
g		2.0020	26		2.0020	29		2.0020	28		2.0020	17		2.0020	6		2.0020	10
	2.0036	2.0042	42	2.0036	2.0041	87	2.0036	2.0041	62	2.0036	2.0041	32	2.0036	2.0043	49	2.0037	2.0043	31
		2.0046	48		2.0047	81		2.0046	59		2.0046	36		2.0046	49		2.0048	31

Table SI-1

Comparison between the EPR data of radical species **a2a** (see also Table 1) and calculated properties for all radical models on ‘up’ and ‘down’ sides. Isotropic (*A*_{iso}) and anisotropic hyperfine couplings (*A*_{aniso}) are in MHz. Principal directions are given with respect to the orthogonal crystallographic axes <abc>. The last column indicates the angle (in degrees) between corresponding experimental and calculated eigenvector directions.

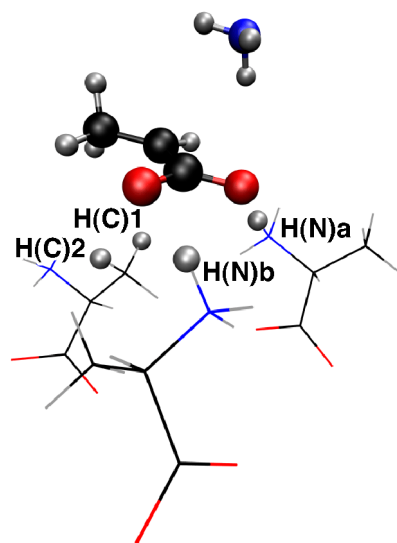


Figure SI-1

Indication of protons in radical model **a3a³** that give rise to the long-range dipolar hyperfine couplings reported in Table 2.

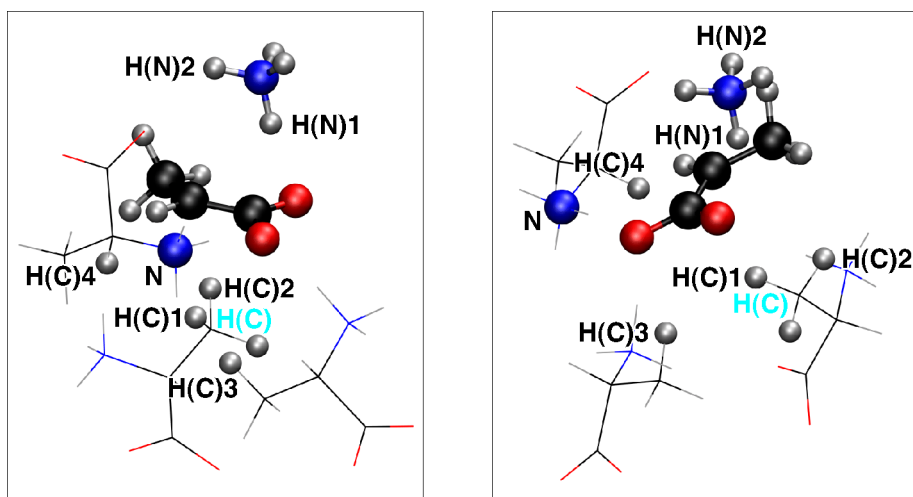
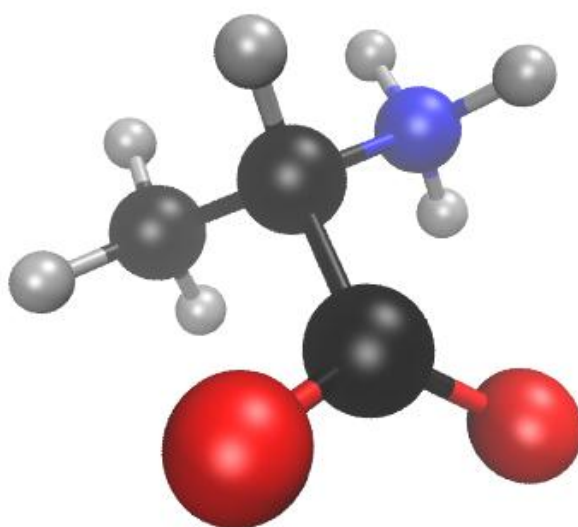


Figure SI-2

Two views of radical model **a4a**² in which protons have been indicated that give rise to the long-range dipolar hyperfine couplings reported in Table 3.

Radiation chemistry of alanine



Movie SI-1

An animation with voice-over illustrating the events taking place in the reductive radiation chemistry of alanine, as outlined in this paper.