

valence angles and Fig. 1 is a drawing of the title compound.*

Related literature. The title compound was prepared from the reaction of diphenylfulvene and dichloro- ketene (Bartlett & Ando, 1970). The mechanism of hydrolysis of similar compounds to form tropolone derivatives has been reported (Asao, Machiguchi, Kitamura & Kitahara, 1970). Related crystal structures: Friedrichsen, Debaerdemaeker, Bottcher, Hahnemann & Schmidt (1983), Watson & Nagl (1987).

* Lists of H-atom coordinates, anisotropic thermal parameters and structure factors have been deposited with the British Library Document Supply Centre as Supplementary Publication No. SUP 44246 (20 pp.). Copies may be obtained through The Executive Secretary, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England.

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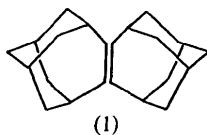
Structure of Bis(homoadamantane)

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Abstract. 1,2,3,4,5,6,7,8,9,10,11,12,13,14-Tetra-decahydro-1,5:3,7:8,12:10,14-tetramethanononane (eicosene) (1), $C_{20}H_{28}$, $M_r = 268.45$, monoclinic, $P2_1/n$, $a = 6.593$ (1), $b = 12.114$ (2), $c = 9.628$ (1) Å, $\beta = 92.19$ (1)°, $V = 768.4$ Å³, $Z = 2$, $D_x = 1.16$ g cm⁻³, $\lambda(\text{Mo } K\alpha) = 0.71073$ Å, $\mu = 0.60$ cm⁻¹, $F(000) = 296$, $T = 293$ K, $R = 0.054$ for 968 unique reflections. The double bond is shielded on the ends by H···H separations of 2.05 (3) Å and on top and bottom by H···H separations ranging from 2.52 (3) to 3.14 (3) Å, which is consistent with the absence of normal olefinic reactivity in the molecule. Molecular-mechanics calculations predict $E_{\text{strain}} = 145.4$ kJ and $\Delta H_f = -77.6$ kJ.



Experimental. Colorless crystal of (1); dimensions 0.45 × 0.28 × 0.30 mm; Nicolet R3m/μ update of a $P2_1$ diffractometer; data collected in the Wyckoff mode ($3 \leq 2\theta \leq 50^\circ$, ω varied, 2θ fixed), variable scan speed (4 to 29.3° min⁻¹), monochromated Mo $K\alpha$ radiation; lattice parameters from a least-squares refinement of 25

Table 1. Atomic coordinates ($\times 10^4$) and equivalent isotropic thermal parameters (Å² $\times 10^3$)

	<i>x</i>	<i>y</i>	<i>z</i>	U_{eq}^*
C(1)	3 (3)	456 (2)	358 (2)	45 (1)
C(2)	-216 (3)	475 (2)	1936 (2)	54 (1)
C(3)	-2267 (4)	36 (2)	2385 (2)	65 (1)
C(4)	-2407 (4)	-1205 (2)	2408 (2)	64 (1)
C(5)	-714 (4)	-1663 (2)	3348 (2)	69 (1)
C(6)	1311 (4)	-1357 (2)	2754 (2)	71 (1)
C(7)	1515 (4)	-108 (2)	2725 (2)	69 (1)
C(8)	-2293 (4)	-1732 (2)	978 (2)	66 (1)
C(9)	1481 (4)	-1885 (2)	1340 (3)	71 (1)
C(10)	-249 (4)	-1587 (2)	315 (2)	56 (1)

* Equivalent isotropic U defined as one third of the trace of the orthogonalized U_{ij} tensor.

reflections ($20.57 \leq 2\theta \leq 35.35^\circ$), angles measured by a centering routine associated with the diffractometer; systematic absences ($h0l$, $h + l = 2n + 1$; $0k0$, $k = 2n + 1$) consistent with space group $P2_1/n$, Laue symmetry $2/m$; two monitored reflections ($30\bar{1}$ and $0\bar{1}3$) showed no statistically significant changes in intensities; 1348 independent reflections measured ($0 \leq h \leq 7$, $0 \leq k \leq 14$, $-11 \leq l \leq 11$) with $968 \geq 3\sigma(I)$; Lorentz-polarization corrections applied, ψ -scan empirical absorption correction (transmission factors 0.903–0.977); direct methods and difference Fourier syntheses revealed the positions of all atoms; block-cascade least-squares refinement with a single thermal parameter for all H atoms; $R = 0.0525$, $wR = 0.0500$, 968 reflections and 134 parameters, $R = 0.0771$ for all

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Table 2. Bond lengths (Å) and valence angles (°)

C(1)—C(2)	1.532 (3)	C(1)—C(1')	1.302 (4)
C(1)—C(10')	1.527 (3)	C(2)—C(3)	1.531 (3)
C(2)—C(7)	1.521 (3)	C(3)—C(4)	1.506 (3)
C(4)—C(5)	1.515 (3)	C(4)—C(8)	1.521 (3)
C(5)—C(6)	1.518 (4)	C(6)—C(7)	1.519 (4)
C(6)—C(9)	1.512 (3)	C(8)—C(10)	1.524 (3)
C(9)—C(10)	1.523 (3)	C(10)—C(1')	1.527 (3)
C(2)—C(1)—C(1')	122.6 (2)	C(2)—C(1)—C(10')	115.0 (2)
C(1')—C(1)—C(10')	122.4 (2)	C(1)—C(2)—C(3)	113.1 (2)
C(1)—C(2)—C(7)	113.1 (2)	C(3)—C(2)—C(7)	110.6 (2)
C(2)—C(3)—C(4)	114.0 (2)	C(3)—C(4)—C(5)	109.3 (2)
C(3)—C(4)—C(8)	113.6 (2)	C(5)—C(4)—C(8)	109.0 (2)
C(4)—C(5)—C(6)	108.9 (2)	C(5)—C(6)—C(7)	109.3 (2)
C(5)—C(6)—C(9)	109.4 (2)	C(7)—C(6)—C(9)	113.3 (2)
C(2)—C(7)—C(6)	114.0 (2)	C(4)—C(8)—C(10)	114.0 (2)
C(6)—C(9)—C(10)	113.8 (2)	C(8)—C(10)—C(9)	110.7 (2)
C(8)—C(10)—C(1')	113.0 (2)	C(9)—C(10)—C(1')	113.5 (2)

1351 reflections, $S = 1.622$; $(\Delta/\sigma)_{\max} = 0.010$, $(\Delta/\sigma)_{\text{av}} = 0.002$; largest peaks in the final difference map of $+0.15$ and $-0.13 \text{ e } \text{Å}^{-3}$; $\sum w(|F_o| - |F_c|)^2$ minimized with $w = [\sigma^2(F_o) + 0.000223F_o^2]^{-1}$; all computer programs supplied by Nicolet for Desktop 30 Micro-clipse and Nova 4 configuration (Nicolet Instrument Corporation, 1986); atomic scattering factors and anomalous-dispersion corrections from *International Tables for X-ray Crystallography* (1974). The X-ray parameters were used in a molecular-mechanics calculation (Allinger & Yuh, 1980). Table 1 lists atomic positional parameters and U_{eq} values while Table 2 lists interatomic distances and valence angles.* The structure and atomic numbering of (1) are shown in Fig. 1.

Related literature. The lack of chemical reactivity of bis(homoadamantane) with singlet oxygen and epoxidizing agents (Meijer & Wynberg, 1981) and with

* Lists of H-atom coordinates, anisotropic thermal parameters and structure factors have been deposited with the British Library Document Supply Centre as Supplementary Publication No. SUP 44287 (11 pp.). Copies may be obtained through The Executive Secretary, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England.

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N-(N'-Phenylsulfamoyl)oxazolidinone-2

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Abstract. 2-Oxo-3-oxazolidinesulfonamide, $\text{C}_9\text{H}_{10}\text{N}_2\text{O}_4\text{S}$, $M_r = 242.29$, monoclinic, $P2_1/c$, $a = 11.217$ (3), $b = 7.653$ (2), $c = 12.503$ (6) Å, $\beta =$

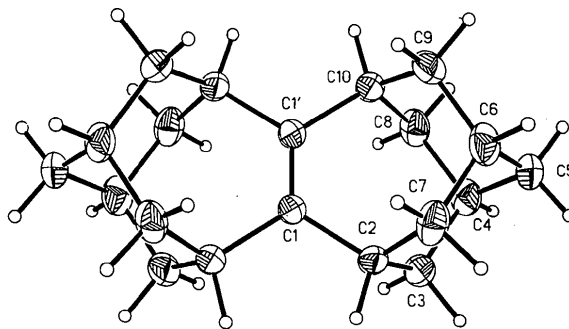


Fig. 1. Drawing of the title compound. Thermal ellipsoids are drawn at the 25% probability level. H atoms are represented by spheres of arbitrary size.

$\text{Br}_2\text{-CCl}_4$ and other reagents (Gill & Hands, 1971) has been discussed. Gerson, Lopez, Akaba & Nelson (1981) investigated the ease of electron loss and the stability of the resulting cation.

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96.59 (3)°, $V = 1066$ (4) Å³, $Z = 4$, $D_m = 1.50$ (2), $D_x = 1.510 \text{ Mg m}^{-3}$, $\text{MoK}\alpha$ radiation, $\lambda = 0.7107$ Å, $\mu = 2.53 \text{ mm}^{-1}$, $F(000) = 504$, $T = 295 \text{ K}$, final $R =$