abnormal hemoglobins[12]. We presumed the genetic code to be universal.

It is worth noting that our deductions have led to results which differ on several points from comparable predictions of YANOFSKI[11] and of TRUPIN et al.[3]. The scheme derived by OSGOOD[13] does not fit the present state of knowledge. The genetic code may be more complicated if 5′ terminal, 3′ terminal and internal codons are recognized in somewhat different ways[3], and if the code is not as consistently degenerate as supposed here[14].

Zusammenfassung. Auf Grund von Literaturangaben und durch Deduktion haben wir ein dreidimensionales Schema (oder Modell) des systematisch degenerierten genetischen Codes entworfen, aus dem man in einfacher Weise ablesen kann, welche Aminosäuresubstitutionen aus der Veränderung einer Base folgen.

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## Adaptation of the CAHN-INGOLD-PRELOG System of Nomenclature to Hexahelicene

The CAHN-INGOLD-PRELOG system of nomenclature for optically active compounds[1,2] has been applied successfully to a wide variety of compounds. Present nomenclature rules, however, do not provide for an R (rectus) or S (sinister) assignment to the enantiomers of compounds such as hexahelicene (I). This compound exhibits optical activity because intramolecular crowding forces the molecule to twist into an asymmetric helix[3].

An extension of the CAHN-INGOLD-PRELOG system, allowing for an R or S assignment to the enantiomers of such compounds, would seem to be quite simple. If one observes this molecule as shown in I, one of the terminal rings would appear slightly above and overlapping the other, as shown schematically in II or III. Arrows drawn in the direction of the spiral, i.e. from the terminal ring nearest the observer to the other terminal ring, going around the molecule, will describe a clockwise rotation in one case (II), and a counter-clockwise rotation in the other (III).
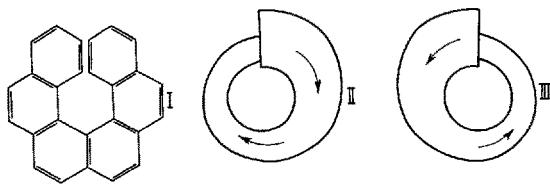
It is proposed to assign the symbol R to the clockwise spiral and S to the counter-clockwise spiral. This assignment will remain unchanged, even if the molecule is flipped over or rotated. This method is applicable to other compounds derived from hexahelicene, such as IV, because assignment is dependent only on the direction of the spiral. For this reason, this method of assignment may also be applied to any other spiral or screw-shaped molecule, such as 4,5-dimethyl-substituted phenanthrene[4], starches and proteins.
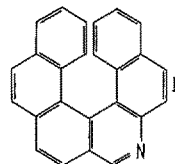
Résumé. On propose une extension du système de CAHN-INGOLD-PRELOG pour nommer des enantiomers des composés en forme d'hélice tels que le hexahélicène.

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