

[54] **METHOD FOR THE PRODUCTION OF A VEHICLE SUBSTANCE WHICH IS CAPABLE OF COVALENT BONDING WITH BIOLOGICALLY ACTIVE MATTER**

[75] **Inventors: Christof Biebricher, Adelebsen; Rüdiger Luce, Herzberg, both of Fed. Rep. of Germany**

[73] **Assignee: Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V., Göttingen, Fed. Rep. of Germany**

[21] **Appl. No.: 797,677**

[22] **Filed: May 17, 1977**

[30] **Foreign Application Priority Data**
 May 18, 1976 [DE] Fed. Rep. of Germany 2621974

[51] **Int. Cl.² D06M 13/42; C08B 15/06; C08B 37/02**

[52] **U.S. Cl. 8/192; 435/179; 435/178; 435/181; 525/123; 536/51; 8/DIG. 11**

[58] **Field of Search 195/63, 68; 8/192, DIG. 11; 526/23, 49; 536/51, 1**

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,574,062	4/1971	Sato	195/63
3,672,955	6/1972	Stanley	195/68
3,705,084	12/1972	Reynolds	195/63
3,905,923	9/1975	Klug	195/DIG. 11
3,929,574	12/1975	Wood et al.	195/63 X
3,947,352	3/1976	Cuatrecasas et al.	195/63
3,950,222	4/1976	Takasaki	195/68
4,063,017	12/1977	Tsao et al.	195/63 X

Primary Examiner—Lionel M. Shapiro
Attorney, Agent, or Firm—Browdy and Neimark

[57] **ABSTRACT**

Process for preparing a vehicle substance capable of covalent bonding with biological material, especially enzymes, by reacting a matrix containing —OH or NH₂ groups with an organic diisocyanate under anhydrous conditions. The distance between the matrix and biological material may be extended by a stepwise reaction of the matrix with an organic diisocyanate, and organic spacer containing two or more —OH and/or NH₂ groups and again with an organic diisocyanate. The coupling of the vehicle material with biological material takes place in buffered aqueous solution.

26 Claims, 8 Drawing Figures