

**PCT**WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H01J 9/02	A1	(11) International Publication Number: WO 97/18577 (43) International Publication Date: 22 May 1997 (22.05.97)
(21) International Application Number: PCT/US96/18145 (22) International Filing Date: 13 November 1996 (13.11.96) (30) Priority Data: 60/006,747 15 November 1995 (15.11.95) US (71) Applicant (for all designated States except US): E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): BLANCHET-FINCHER, Graciela, Beatriz [US/US]; 2005 Fairwood Lane, Wilmington, DE 19810-3618 (US). HOLSTEIN, William, Leo [US/US]; 1122 Elderon Drive, Wilmington, DE 19808-1923 (US). SUBRAMONEY, Shekhar [IN/US]; 425 Stella Drive, Hockessin, DE 19707-1922 (US). HERRON, Norman [GB/US]; 408 Apple Road, Newark, DE 19711-5118 (US). (74) Agent: SCHAEFFER, Andrew, L.; E.I. du Pont de Nemours and Company, Legal Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US).		(81) Designated States: AU, CA, CN, JP, KR, SG, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>
(54) Title: PROCESS FOR MAKING A FIELD EMITTER CATHODE USING A PARTICULATE FIELD EMITTER MATERIAL		
(57) Abstract A process for making a field emitter cathode by attaching a particulate field emitter material to a substrate. The particulate field emitter material is dispersed in a solution of a metal compound in a solvent and deposited onto the surface of the substrate. The substrate is heated for sufficient time to completely reduce the metal compound to the metal. The resulting field emitter cathode is a substrate coated with a thin layer of the metal with a particulate field electron emitter material embedded therein and protruding therefrom.		