



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : B01J 12/00, 8/02, 19/00, 19/08, C01C 3/02	A1	(11) International Publication Number: WO 99/01211 (43) International Publication Date: 14 January 1999 (14.01.99)
(21) International Application Number: PCT/US98/13825 (22) International Filing Date: 2 July 1998 (02.07.98) (30) Priority Data: 60/051,659 3 July 1997 (03.07.97) US (71) Applicant: E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US). (72) Inventors: KOCH, Theodore, A.; 600 Cheltenham Road, Wilmington, DE 19808 (US). MEHDIZADEH, Mehrdad; 1117 Arundel Drive, Wilmington, DE 19808 (US). BUEKER, David, Julian; 508 Berkshire Street, Victoria, TX 77904 (US). (74) Agent: STEVENSON, Robert, B.; E.I. du Pont de Nemours and Company, Legal Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US).		(81) Designated States: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GW, HR, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published With international search report.

(54) Title: METHOD OF INDUCTIVELY IGNITING A CHEMICAL REACTION**(57) Abstract**

An improved method of igniting a catalyzed gas phase chemical reaction involving the act of providing a reactor vessel (10), wherein the gaseous reactant, continuously passing through the reactor, makes contact with a solid phase metallic catalyst media (18), with an inductive coil (14) within the reactor (10) on the inlet side of the catalyst and a porous thermal, spark and radiation barrier (17) between the induction coil (14) and solid catalyst (18). According to the improved method of ignition, the metallic catalyst media (18) is inductively heated in order to ignite the chemical reaction and after ignition the inductive heating is suspended and the exotherm of the chemical reaction is thereafter relied upon to sustain the reaction temperature. Such a reactor and method of operation is particularly useful for continuous production of hydrogen cyanide by the Andrussow process.

