



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶: C07D 263/10, C07C 29/143, C07B 53/00, C07D 263/62, B01J 31/18	A1	(11) International Publication Number: WO 99/24410 (43) International Publication Date: 20 May 1999 (20.05.99)
(21) International Application Number: PCT/US98/24036 (22) International Filing Date: 12 November 1998 (12.11.98) (30) Priority Data: 60/065,502 12 November 1997 (12.11.97) US (71) Applicant: THE PENNSYLVANIA STATE UNIVERSITY [US/US]; 113 Technology Center, 200 Innovation Boule- vard, University Park, PA 18602-7000 (US). (72) Inventor: ZHANG, Xumu; Department of Chemistry, The Pennsylvania State University, 152 Davey Laboratory, Uni- versity Park, PA 16802 (US). (74) Agents: GARRETT, Arthur, S. et al.; Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC 20005-3315 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW; 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, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the</i> <i>claims and to be republished in the event of the receipt of</i> <i>amendments.</i>
(54) Title: TRANSITION METAL-CATALYZED REACTIONS BASED ON CHIRAL AMINE OXAZOLINYL LIGANDS		
(57) Abstract The invention is drawn to novel transition metal catalysts for the practical synthesis of important chiral molecules. The transition metal catalysts comprise chiral ligands based on chiral amine oxazolinyl ligands. The invention includes methods of making the catalysts, and methods of performing reactions using the catalysts.		