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(54) Title: ETHYLENE OLIGOMERIZATION PROCESSES

(57) Abstract: Disclosed herein is a process for forming an oligomer product comprising (a) introducing into a reaction zone (i) ethylene; (ii) a heteroatomic ligand metal salt complex comprising a heteroatomic ligand complexed to a first metal salt; (iii) a second metal salt wherein an equivalent molar ratio of the second metal salt to the heteroatomic ligand of the heteroatomic ligand metal salt complex is at least 0.5: 1 and where the second metal salt is an iron salt, a cobalt salt, or any combination thereof; (iv) an organoaluminum compound; and (b) forming an oligomer product. Also disclosed herein is a process comprising (a) introducing into a reaction zone (i) ethylene; (ii) heteroatomic ligand; (iii) a metal salt where an equivalent molar ratio of the metal salt to the heteroatomic ligand is at least 1.5: 1; (iv) an organoaluminum compound; and (b) forming an oligomer product.