

Title (en)  
Metal complexes as bleach activators

Title (de)  
Bleichaktive Metall-Komplexe

Title (fr)  
Complexes métalliques comme activateurs de blanchiment

Publication  
**EP 0869171 B1 20041103 (DE)**

Application  
**EP 98105257 A 19980324**

Priority  
DE 19714122 A 19970405

Abstract (en)  
[origin: EP0869171A2] Manganese (Mn) and cobalt (Co) complex compounds of formula  $\text{ÄLnMmXpÜ}(\text{power } z)\text{Yq(I)}$ , with a (substituted) bis(2-hydroxybenzylidene)-2,6-pyridine-diamine ligand, are new; in which M = Mn in the II, III, IV, V and/or VI oxidation stage or Co in the II and/or III oxidation stage; X = a co-ordination or bridging group; Y = a counterion in the stoichiometric amount to balance a charge z; z = the charge of the complex and can be positive, zero or negative; n, m = 1-4; p = 0-15; q = z/the charge on Y; L = a ligand of formula (II); R<1>, R<2> = hydrogen (H), 1-10 carbon (C) alkyl, cycloalkyl or aryl; R<3-8> = H, 1-30 C alkyl, cycloalkyl or aryl, 1-4 C alkoxy, optionally substituted amino or ammonium, halogen, sulpho, carboxyl,  $-(\text{CH}_2)_r\text{-COOH}$ ,  $-(\text{CH}_2)_r\text{-SO}_3\text{H}$ ,  $-(\text{CH}_2)_r\text{-PO}_3\text{H}_2$  or  $-(\text{CH}_2)_l\text{-OH}$ ; r = 0-4; l = 1-4; the acid groups may be in salt form. Compounds (I) in which M = Mn, X = water (H<sub>2</sub>O), z = 0 and R<1-8> = H are excluded.

IPC 1-7  
**C11D 3/395**; **C07D 213/74**

IPC 8 full level  
**C07D 213/74** (2006.01); **C07F 13/00** (2006.01); **C07F 15/06** (2006.01); **C11D 3/16** (2006.01); **C11D 3/39** (2006.01); **C11D 3/395** (2006.01); **D06L 3/02** (2006.01); **D06L 4/13** (2017.01); **D21C 9/10** (2006.01); **D21C 9/16** (2006.01)

CPC (source: EP US)  
**C11D 3/168** (2013.01 - EP US); **C11D 3/3932** (2013.01 - EP US); **D06L 4/13** (2016.12 - EP US); **D21C 9/1036** (2013.01 - EP US); **D21C 9/163** (2013.01 - EP US)

Cited by  
GB2366575A; EP3524347A1; WO2013060708A1; US6528470B1; WO2013060706A1; WO2017186480A1; WO9964554A1; US10214606B2; WO2012000846A1; WO2014154508A1; US9790452B2

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**EP 98105257 A 19980324**; BR 9801148 A 19980403; DE 19714122 A 19970405; DE 59812192 T 19980324; ES 98105257 T 19980324; JP 9204098 A 19980403; US 5420498 A 19980402; US 61321100 A 20000710