

Title (en)

Preparation method of morphologically homogeneous (111) tabular crystals rich in silver bromide

Title (de)

Verfahren zur Herstellung von morphologisch homogenen silberbromidreichen tafelförmigen (111)-Kristallen

Title (fr)

Procédé pour la préparation des cristaux tabulaires (111) riches en bromure d'argent et morphologiquement homogènes

Publication

EP 0911687 A1 19990428 (EN)

Application

EP 97203313 A 19971024

Priority

EP 97203313 A 19971024

Abstract (en)

A method is disclosed for preparing an emulsion having grains rich in silver bromide in the presence of gelatin as a protective colloid in a reaction vessel wherein a yield of more than 250 g of precipitated silver nitrate per liter of reaction vessel mixture is attained, wherein at least 70 % of a total projected area of all grains is provided by $\{111\}$ tabular grains having an average aspect ratio of more than 2:1 and an average thickness of from 0.05 up to 0.30 μm and wherein a ratio by number of procentual amounts of hexagonal tabular grains to triangular tabular crystals present is more than 10:1, said method comprising following steps : preparing in a reaction vessel a gelatinous dispersion medium containing an initial amount of oxidized gelatin corresponding with less than 50 % of a total amount of gelatin used in the said method, and said dispersion medium having a volume of less than 2 liter per 500 g of silver nitrate to be precipitated; precipitating therein silver halide crystal nuclei by double-jet precipitation of an aqueous silver nitrate and an aqueous solution comprising halide ions, wherein less than 10 % by weight of a total amount of silver nitrate used is consumed; adding to said reaction vessel gelatin in an amount of more than 50 % of a total amount of gelatin used in the said method; growing said silver halide crystal nuclei by further precipitation of silver halide by means of double-jet precipitation of an aqueous silver nitrate solution and an aqueous solution comprising halide ions, wherein more than 90 % by weight of a total amount of silver nitrate is consumed, concentrating by ultrafiltration the said reaction mixture volume in the said reaction vessel obtained during precipitation growth steps.

IPC 1-7

G03C 1/005

IPC 8 full level

G03C 1/015 (2006.01); **G03C 1/005** (2006.01); **G03C 1/035** (2006.01); **G03C 1/047** (2006.01); **G03C 5/16** (2006.01)

CPC (source: EP)

G03C 1/0051 (2013.01); **G03C 5/16** (2013.01)

Citation (search report)

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Designated contracting state (EPC)

BE DE FR GB

DOCDB simple family (publication)

EP 0911687 A1 19990428; **EP 0911687 B1 20040714**; DE 69729869 D1 20040819; DE 69729869 T2 20050519; JP H11223894 A 19990817

DOCDB simple family (application)

EP 97203313 A 19971024; DE 69729869 T 19971024; JP 30107298 A 19981022