

Title (en)

Epitaxially sensitized ultrathin dump iodide tabular grain emulsions

Title (de)

Epitaxial sensibilisierte Emulsionen mit ultradünnen tafelförmigen Körnern, wobei das Iodid sehr schnell zugefügt wird

Title (fr)

Emulsions aux grains tabulaires ultraminces sensibilisés épitaxialement à l'iodure ajouté très vite

Publication

EP 0699948 A1 19960306 (EN)

Application

EP 95420237 A 19950821

Priority

- US 29743094 A 19940826
- US 29656294 A 19940826
- US 29719594 A 19940826
- US 35925194 A 19941219
- US 44148895 A 19950515

Abstract (en)

An improved spectrally sensitized ultrathin tabular grain emulsion is disclosed in which tabular grains (a) having $\approx 111\bar{u}$ major faces, (b) containing greater than 70 mole percent bromide, based on silver, (c) accounting for greater than 90 percent of total grain projected area, (d) exhibiting an average equivalent circular diameter of at least 0.7 μm , (e) exhibiting an average thickness of less than 0.07 μm , and (f) having latent image forming chemical sensitization sites on the surfaces of the tabular grains, are spectrally sensitized and improved by employing dump iodide host tabular grains and, in forming the surface chemical sensitization sites, at least one silver salt epitaxially located on the tabular grains. A photographic element is disclosed comprised of a support, a first silver halide emulsion layer coated on the support and sensitized to produce a photographic record when exposed to specular light within the minus blue visible wavelength region of from 500 to 700 nm, a second silver halide emulsion layer capable of producing a second photographic record coated over the first silver halide emulsion layer to receive specular minus blue light intended for the exposure of the first silver halide emulsion layer, the second silver halide emulsion layer being capable of acting as a transmission medium for the delivery of at least a portion of the minus blue light intended for the exposure of the first silver halide emulsion layer in the form of specular light, wherein the second silver halide emulsion layer is comprised of the improved spectrally sensitized ultrathin tabular grain emulsion of the invention. The ultrathin dump iodide tabular grain emulsions with silver salt epitaxy chemical sensitization have been observed to produce larger than expected speed increases, to produce higher than expected contrasts, to be unexpectedly specularly transmissive and therefore compatible with forming sharp photographic images in underlying emulsion layers, to exhibit a higher percentage of total light absorption in the wavelength region of maximum absorption by the spectral sensitizing dye or dyes employed, and to exhibit a surprising tolerance of inadvertent manufacturing variances.

IPC 1-7

G03C 1/005

IPC 8 full level

G03C 1/035 (2006.01); **G03C 1/005** (2006.01); **G03C 1/10** (2006.01); **G03C 1/46** (2006.01); **G03C 1/12** (2006.01)

CPC (source: EP)

G03C 1/0051 (2013.01); **G03C 1/12** (2013.01); **G03C 1/46** (2013.01); **G03C 2001/0055** (2013.01); **G03C 2001/03511** (2013.01); **G03C 2001/03517** (2013.01); **G03C 2001/03552** (2013.01); **G03C 2200/03** (2013.01)

Citation (search report)

- [Y] FR 2516255 A1 19830513 - EASTMAN KODAK CO [US]
- [Y] EP 0566083 A1 19931020 - EASTMAN KODAK CO [US]
- [Y] EP 0507702 A1 19921007 - EASTMAN KODAK CO [US]

Cited by

EP0845703A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0699948 A1 19960306; **EP 0699948 B1 20010718**; DE 69521751 D1 20010823; DE 69521751 T2 20020523; JP H08101473 A 19960416

DOCDB simple family (application)

EP 95420237 A 19950821; DE 69521751 T 19950821; JP 21777995 A 19950825