Holographic photochemistry: developing, fixing and bleaching

**unexposed plate**
- silver halide (AgBr) crystals (grains)

**exposed plate**
- exposure reduces sites on some grains into silver (Ag⁺ ⇆ Ag)

**developed plate**
- development converts all marked grains to Ag

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**fixer**
- wash
  - Ag grain
  - soluble Ag complex
  - only Ag grains remain

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**reversal bleach**
- wash
  - soluble Ag complex
  - AgBr
  - Only never-exposed AgBr remains

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**physical transfer bleach**
- wash
  - Ag becomes soluble, gets deposited on AgBr
  - Most of original AgBr remains in the emulsion

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**rehalogenating bleach**
- phase grating
- Ag is converted to AgBr

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