



US005389122A

# United States Patent [19]

[11] Patent Number: **5,389,122**

Glicksman

[45] Date of Patent: **Feb. 14, 1995**

[54] **PROCESS FOR MAKING FINELY DIVIDED, DENSE PACKING, SPHERICAL SHAPED SILVER PARTICLES**

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[75] Inventor: **Howard D. Glicksman, Wilmington, Del.**

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[73] Assignee: **E. I. Du Pont de Nemours and Company, Wilmington, Del.**

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[21] Appl. No.: **186,244**

*Primary Examiner*—George Wyszomierski

[22] Filed: **Jan. 25, 1994**

### Related U.S. Application Data

[57] **ABSTRACT**

[63] Continuation-in-part of Ser. No. 89,031, Jul. 13, 1993, abandoned.

A method for the preparation of finely divided, dense packing, spherical shaped silver particles comprising the sequential steps of:

[51] Int. Cl.<sup>6</sup> ..... **B22F 9/24**

(1) reacting an aqueous mixture of a silver salt with an alkanolamine to form a homogeneous aqueous solution of a dissolved silver alkanolamine complex;

[52] U.S. Cl. .... **75/370; 75/371; 75/721; 75/741**

(2) preparing an aqueous solution of a reducing agent and, optionally, an alkanolamine; and

[58] Field of Search ..... **75/370, 371, 634, 636, 75/721, 741**

(3) mixing together the silver alkanolamine complex solution and the reducing agent alkanolamine solution at a buffered pH and a temperature of 10° C. to 100° C. to form finely divided spherical silver particles.

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**12 Claims, No Drawings**