(12) **United States Patent**
Basceri et al.

(10) **Patent No.: US 6,566,147 B2**
(45) **Date of Patent: May 20, 2003**

(54) **METHOD FOR CONTROLLING DEPOSITION OF DIELECTRIC FILMS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/776,217**

(22) Filed: **Feb. 2, 2001**

(65) **Prior Publication Data**

US 2002/0132374 A1 Sep. 19, 2002

(51) **Int. Cl.**[7] **H01L 21/00**
(52) **U.S. Cl.** **438/3**; 438/763; 438/785
(58) **Field of Search** 438/3, 240, 761, 438/763, 785

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(57) **ABSTRACT**

A method for controlling stoichiometry of dielectric films, e.g., BST films, preferably formed at low deposition temperatures. A deposition process may use an adjustment in oxidizer flow and/or partial pressure, the provision of a hydrogen-containing component, an adjustment in hydrogen-containing component flow and/or partial pressure, an adjustment in deposition pressure, and/or a modification of system component parameters (e.g., heating a shower head or adjusting a distance between a shower head of the deposition system and a wafer upon which the film is to be deposited), to control the characteristics of the dielectric film, e.g., film stoichiometry.

50 Claims, 3 Drawing Sheets