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Basceri et al.

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(54) **CHEMICAL VAPOR DEPOSITION METHODS OF FORMING BARIUM STRONTIUM TITANATE COMPRISING DIELECTRIC LAYERS, INCLUDING SUCH LAYERS HAVING A VARIED CONCENTRATION OF BARIUM AND STRONTIUM WITHIN THE LAYER**

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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 62 days.

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(21) Appl. No.: **10/769,149**

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Related U.S. Application Data

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(57) **ABSTRACT**

(51) **Int. Cl.**
C23C 16/00 (2006.01)
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The invention a chemical vapor deposition method of forming a barium strontium titanate comprising dielectric layer having a varied concentration of barium and strontium, and/or titanium, within the layer. A substrate is positioned within a chemical vapor deposition reactor. Barium and strontium are provided within the reactor by flowing at least one metal organic precursor to the reactor. Titanium is provided within the reactor. One or more oxidizers are flowed to the reactor. In one aspect, conditions are provided within the reactor to be effective to deposit a barium strontium titanate comprising dielectric layer on the substrate from the reactants.

(52) **U.S. Cl.** **427/255.36**; 427/255.32; 427/255.28

(58) **Field of Classification Search** 427/255.15, 427/255.19, 126.3, 255.23, 255.31, 255.32, 427/255.36, 255.7; 438/3, 785
See application file for complete search history.

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29 Claims, 2 Drawing Sheets

