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**Khan et al.**

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(54) **APPARATUS FOR PRODUCING  
NANO-PARTICLES OF MOLYBDENUM  
OXIDE**

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(52) **U.S. Cl.** ..... **422/198; 422/207; 422/202;**  
**422/244; 266/148; 266/146**

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**422/207, 244, 150, 151, 188, 189, 194; 75/343,**  
**75/363, 367; 266/148-149**

See application file for complete search history.

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(57) **ABSTRACT**

Apparatus for producing nano-particles comprises a furnace  
defining a vapor region therein. A precipitation conduit hav-  
ing an inlet end and an outlet end is positioned with respect to  
the furnace so that the inlet end is open to the vapor region. A  
quench fluid port positioned within the precipitation conduit  
provides a quench fluid stream to the precipitation conduit to  
precipitate nano-particles within the precipitation conduit. A  
product collection apparatus connected to the outlet end of  
the precipitation conduit collects the nano-particles produced  
within the precipitation conduit.

**8 Claims, 3 Drawing Sheets**

