PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : C30B 15/10	A1	(11) International Publication Number: WO 00/46432
		(43) International Publication Date: 10 August 2000 (10.08.00)

(21) International Application Number: PCT/US00/00614

(22) International Filing Date: 11 January 2000 (11.01.00)

(30) Priority Data:
09/245,238 5 February 1999 (05.02.99) US

(71) Applicant: MEMC ELECTRONIC MATERIALS, INC. [US/US]; 501 Pearl Drive, P.O. Box 8, St. Peters, MO 63376 (US).

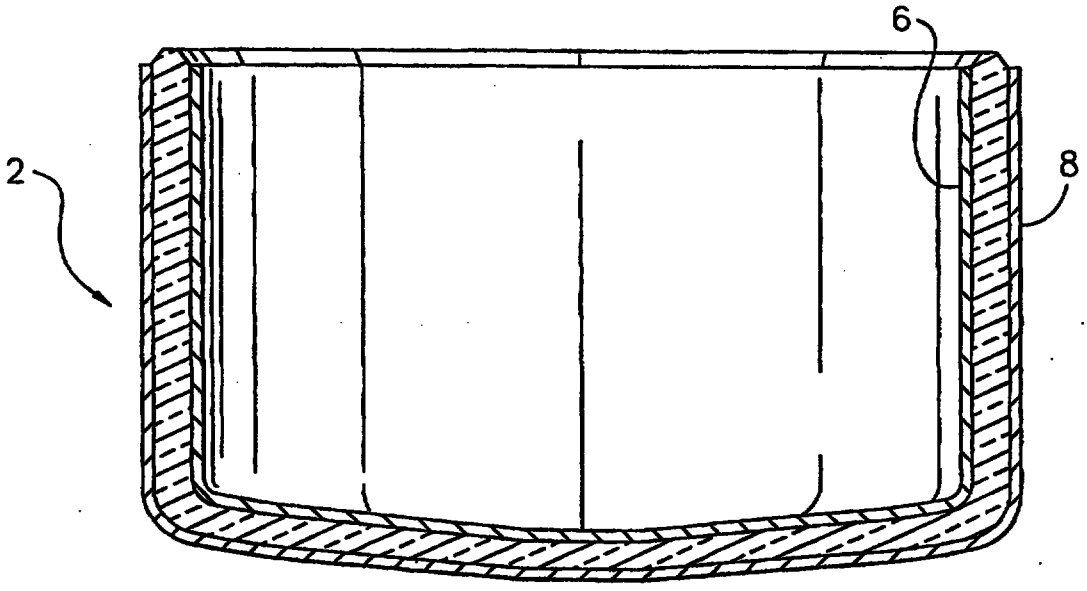
(72) Inventors: PHILLIPS, Richard, J.; 96 Deer Meadow Court, St. Peters, MO 63304 (US). KELTNER, Steven, J.; 399 J–Mark Court, O'Fallon, MO 63366 (US).

(74) Agents: HEJLEK, Edward, J. et al.; Senniger, Powers, Leavitt & Roedel, One Metropolitan Square, 16th Floor, St. Louis, MO 63102 (US).

(81) Designated States: CN, JP, KR, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.

(54) Title: TUNGSTEN DOPED CRUCIBLE AND METHOD FOR PREPARING SAME



(57) Abstract

A process for preparing a quartz crucible having a tungsten doped layer on the inside surface, outside surface, or both the inside surface and the outside surface is disclosed. One or more surfaces of the crucible is exposed to a vaporous tungsten source to anneal the tungsten into the crucible surface and create a tungsten doped layer which behaves similarly to a bubble free layer upon use in a crystal pulling process.