Advances in Solid Oxide Fuel Cells and Electronic Ceramics

Ceramic Engineering and Science Proceedings

Volume 36, Issue 3, 2015

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The American Ceramic Society

WILEY

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A Collection of Papers Presented at the 39th International Conference on Advanced Ceramics and Composites January 25-30, 2015 Daytona Beach, Florida

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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.
Published simultaneously in Canada.

Library of Congress Cataloging-in-Publication Data is available.

ISBN: 978-1-119-21149-5
ISSN: 0196-6219

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gradient along the longitudinal direction of the crucible, giving rise to thermal decomposition of the source powder whereas in the upper part of the crucible the solidification of SiC from the vapour occurs on the seed crystal.

Figure 3. Pressure -dependent phase diagram of Si - C binary system at a fixed temperature of 2500K.

Figure 4. Variation of phase diagram as a function of temperature. The figure shows a part of the pressure-dependent Si-C binary phase diagram shown in Figure 3.

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Figure 8. (a) Si-C phase diagram at 2500K for Case B, i.e., SiC(s)+Si(s) systems with two whole source compositions indicated by the vertical broken line S1 and S2. Equilibrium states realised at different pressures of P_{III} and P_{IV}, for (b) the composition S1 and (c) composition S2 systems, both indicated in Fig.8(a), respectively. Note that (l) in Figure 8(b) and 8(c) represents a Si-C liquid with a composition of l_{III}(l). No chemical reactions with cylinder containers are assumed to occur in these systems.

RECENT PROGRESS OF GaN SUBSTRATES MANUFACTURED BY VAS METHOD

Figure 1. Photograph of the se lf-separate d GaN bulk crystal and the base substrate, whose diameters are 116 mm and 125 mm, respectively. On the left is the resulting GaN bulk, and on the right is the base substrate. The graph paper has a 10-mm grid.

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Figure 6. Appearance of the as-grown bulk GaN having the highest carrier concentration and lowest

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REACTIVE ATMOSPHERES FOR OXIDE CRYSTAL GROWTH

Figure 1. Predominance phase diagrams Fe - O_2 with Gibbs free energy (left) or oxygen partial pressure (right) as ordinate, total pressure is 1 bar. p_{O2} at the triple points of the wüstite phase $Fe_{1-x}O$ (right, inside dashed circles) is from top to bottom: 2.5×10^{-6} bar, 7.8×10^{-11} bar, 1×10^{-26} bar

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Figure 4. Left: The free energy for the formation of Fe_2SiO_4 from constituent oxides (top) is very small,

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DISCUSSION ON POLYCRYSTALS OVER SINGLE CRYSTALS FOR OPTICAL DEVICES

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