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(54) **Reduction of metal oxides in an electrolytic cell**

(57) A method of reducing a metal oxide, such as titania in a solid state in an electrolytic cell is disclosed. The electrolytic cell includes an anode, a cathode, and a molten electrolyte. The electrolyte includes cations of a metal that is capable of chemically reducing the metal oxide. The metal oxide in a solid state is immersed in the

electrolyte. The method includes a step of operating the cell at a potential that is above a potential at which cations of the metal that is capable of chemically reducing the metal oxide deposit as the metal on the cathode, whereby the metal chemically reduces the metal oxide.

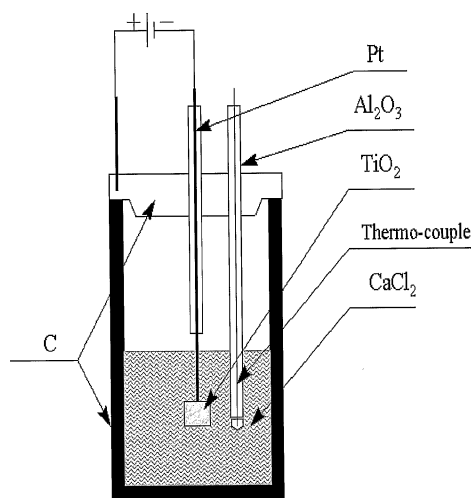


Fig. 1 Schematic of the experimental set up



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| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                             |                                                       |                                         |
| Place of search<br>Munich                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                             | Date of completion of the search<br>18 September 2014 | Examiner<br>Swiatek, Ryszard            |
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