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Author: Susumu Nakayama Masatomi Sakamoto

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High oxidation activity of thallium oxide for carbon combustion

Susumu Nakayama^{a,*} and Masatomi Sakamoto^b

^a Department of Applied Chemistry and Biotechnology, National Institute of Technology,
Niihama College, 7-1 Yagumo-cho, Niihama-shi, Ehime 792-8580, Japan

E-mail : nakayama@chem.niihama-nct.ac.jp

Tel : +81-897-37-7786

Fax : +81-897-37-7777

^b Material and Biological Chemistry, Graduate School of Science and Engineering, Yamagata
University, Yamagata-shi, Yamagata 990-8560, Japan

Highlights

- Tl_2O_3 shows high carbon oxidation activity.
- Combustion-related exothermic peak occurs at 300 °C for carbon black + Tl_2O_3 .
- However, in the absence of Tl_2O_3 , it occurs at 660 °C.
- Decrease in combustion temperature of carbon black is because of oxidation by Tl_2O_3 .
- This is because Tl_2O_3 can readily release its lattice oxygens.

Abstract

The catalytic behavior of thallium (III) oxide (Tl_2O_3) with respect to the combustion of

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