

5.8 Thermite reaction videos

Subjects: Oxidation/reduction, thermodynamics

Description: Video demonstrations of thermite reaction

Materials:

Laptop with internet connection
Overhead projector in lecture hall

Procedure:

1. Use the links below to show a thermite reaction. There are several amateur videos of the thermite reaction on the web and YouTube. The following are from other Universities.

-Purdue University Movie sheets:

http://chemed.chem.purdue.edu/demos/main_pages/5.3.html

-Lee Marek, University of Illinois at Chicago: With commentary. Forward to 1min25sec for demo.

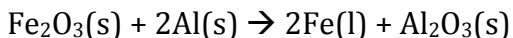
<http://www.chem.uic.edu/marek/cgi-bin/vid7b.cgi>

-University of Oregon Chem Demos site:

<http://chemdemos.uoregon.edu/pages/detail.php?s=thermite&page=1&id=f0609b5064a0a7d90444d523e554b8fc#>

Discussion:

The thermite reaction is so exothermic that it isn't safe to perform in a classroom. In this reaction iron oxide is reduced by aluminum metal to produce iron metal and aluminum oxide. The reaction is given below.



So much energy is evolved as heat that the iron produced is molten. It spews from the reaction vessel and melts through it.

Safety: None

Disposal: None

References: None

