

CWSF 2010 - Peterborough, Ontario



Shakti Ramkumar

Phase Change Materials: Their Application in Energy Conservation

Division: Physical & Mathematical Sciences

Category: Junior

Region: South Fraser

City: Surrey, BC

School: Kwantlen Park Secondary

Abstract: This project explores the use of phase change materials in energy conservation. Several sets of experiments were conducted to test suitability of PCMs for heat storage. The PCM used, paraffin wax was chosen because of its availability. A solar thermal hybrid home heating system using PCMs as a form of heat storage was designed. Results from the experiments were used to design heat storage units.

Biography

I am currently in grade 8 at Kwantlen Park Secondary in the Inter-A Program (in Surrey, BC). I came to Canada in the summer of 2004 from India and speak Tamil at home. I really like to play the acoustic guitar, badminton and baking. I love to read, and always have a book on hand. Aside from India and Canada, I've also lived in Korea for a few months while my dad was working there. I like to shoot videos and do editing and sound mixing. My previous projects at local science fairs include "Public Transportation" and "Heat Transfer". I am particularly concerned about climate change and would like to contribute my share towards avoiding catastrophic effects in the future. I believe that through effective use of existing technology and through reducing our consumption and increasing our efficiency we can tackle this problem. I would like to get a basic degree in engineering first, and may be get another degree in social science after that.