

## CWSF 2007 - Truro, Nova Scotia



### Karen Yu, Janny Xuechen Ke

#### Natural Fibre-Reinforced Cellulose Acetate Composites

**Division:** Health Sciences / None

**Category:** Senior

**Region:** Greater Vancouver

**City:** Vancouver, BC, vancouver, BC

**School:** Sir Winston Churchill Secondary

**Abstract:** We wanted to determine how the type of reinforcement fibre--hemp, flax, pomelo skins, onion peels and hair--reinforced by the anisotropic short fibre method at 5%, 25%, or 45% by mass, affected the tensile, flexural strength, and conductivity of the composite. The reinforced materials were less brittle than the control, and among the composites, the hair reinforcement performed the best, followed by flax and hemp.

#### Biographies

Karen - I'm a grade 11 IB student at Sir Winston Churchill Secondary School. The issue that I am most passionate about is climate change and sustainable development. This is a problem that affects every aspect of the lives of people around the world, no matter where they live or how much they have contributed to the problem. I wish to study engineering at university, though I haven't decided exactly what type yet. As for my pastimes, I play the clarinet and flute, though I'm not especially good at either of them. At home, I love to bake desserts and I spend a large portion of my free time reading. My favorite novel is the Lord of the Rings, and I abs...

Janny Xuechen - Growing up in China, I imagined myself an artist and novelist. But somehow I become extremely interested in engineering and cancer cell electrochemistry during the recent years, and for now, envision the future me as a pediatrician. I plan to major in biomedical engineering for undergrad. During my free time I like to play chess, bake and play basketball with my friends or paint and compose. At school I'm involved in various clubs such as UNICEF and EcoMentors, fundraising or raising awareness; my friends and I also planned a conference for elementary school students in June on sustainability. My most memorable experiences include being a d...

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