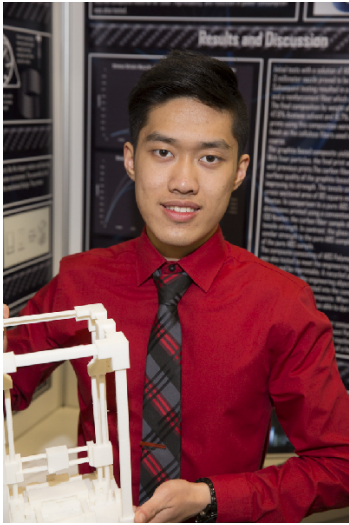


## CWSF 2016 - Montreal, Quebec



### Ray Liu

#### Solvent-Polymer Composite Deposition 3D Printing

**Challenge:** Innovation

**Category:** Senior

**Region:** Greater Vancouver

**City:** Richmond, BC

**School:** R C Palmer Secondary

**Abstract:** The Solvent-Polymer deposition printing process utilizes a composite gel consisting of a polymer suspended in a solvent along with a reinforcement material to form a matrix-reinforcement composite. This gel can be printed without the need to heat the polymer to the high temperatures normally associated with FDM printing, reducing energy consumption, toxic air emissions, fire hazards, and opening the possibility of dye injection.

#### Biography

Ray is a 17 year old, Grade 12 student from Richmond BC. Ray has always had a passion for Engineering and Science. Since the age of 6, he has built a wide collection of gadgets and contraptions of various functions ranging from solar powered robots to wrist mounted flamethrowers. At the age of 8, his parents got him his first soldering iron. It was a 60 watt soldering iron which started him off in his journey in the world of engineering, building different circuits, lasers, and coil guns. When he was nearly 10, he decided he needed a computer, so he built his own computer from two junked computers, swapping the motherboard and the PSU. Now, at the age of 17, he takes on much more advanced projects, such as a 2500 watt electric motorcycle, a fully liquid cooled computer, a personal DIY Laser Cutter, a solid state musical Tesla Coil, and a personal 3D Printer. Ray intends to study Mechatronics Engineering in the future and turn his interests into a career. Ray hopes that his passion for designing, building, and inventing will one day contribute to the betterment of humankind and becoming a step closer to the technological singularity.

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