

design innovation in plastics 2009

student plastics design award

RESULTS FROM THE PRELIMINARY JUDGING SESSION

Held at Bayer MaterialScience, Newbury 10 March 2009

The Six Finalists

Unaflo bathroom system

Jonathon Shek, Northumbria University

This is an energy and water-efficient plumbed bathroom system aimed at small living spaces. There is no bathtub and the system is manufactured using a minimum amount of material. Water enters the plumbing system at three points, and water from the basin is recycled to flush the toilet. In addition, the system uses two existing technologies – energy saving *ShowerStart™* and the *Tornado Flush*, a new flushing technology. Spaces for toiletries are moulded into the structure.

Pull Light

Hannes Simon, University College Falmouth

An off-the-grid, wind-up light for short term use in garages, tents, when working in the dark or for use in the third world where electric light is needed. It is based on the downward pulling action of a toy spinning mechanism combined with a pull cord generator from a bicycle hub powering 8 white super-bright LEDs. One pull gives 2 minutes of light, 3 pulls give up to 5 minutes. A capacitor in the dynamo releases electricity slowly so no battery is needed. The shape of the product centres the force and stabilises the generator so that no force goes to the wrong axis. The drop-shape makes the powering process inclusive for a wide range of user groups and can be easily operated with one hand and enables light to spread across the room as the light fitting drops. It is made primarily from recycled materials and could be produced to different quality standards.

Clean Lock Hygienic Handle

Joshua Sheard, University of Huddersfield

An anti-superbug door handle for locations such as hospital wards and toilets. Using a pumping mechanism, the handle releases 3ml of gel cleanser onto the palm of the hand as it is operated. The hands need to be rubbed together to transfer the cleanser from one palm to the other.

LifeGrip Life Belt

Mark Staweczny, University of Huddersfield

This life belt is designed to provide the user with a very secure grip while handles on each side aid the rescuer to pull the victim out of the water. The arms are placed through the holes in the sides of the LifeGrip and the chin can rest on the top. This life belt can be thrown more accurately and at greater distances than the traditional circular life buoy. The user can also grip the belt while swimming.

Camping Claw Tent Peg

Oliver Woodhouse, University of Huddersfield

Metal tent pegs get lost. Thousands of tent pegs were left behind after last year's Gastonbury Festival, for example. Camping Claw is a tent peg for use without a mallet and is simply pushed into wet, dry or frozen ground with the foot. It is moulded in *Makrolon* polycarbonate in a high-visibility colour.

DIG Flatpack Garden Tools

James Ravenhall, Northumbria University

Garden tools and plant pots tend to be left outside, uncleaned, and this product offers an alternative to cumbersome garden equipment as the tools would be easy to clean and store flat. A trowel, a leaf grabber, an edger and a seeding pot can be pressed out from one laser-cut sheet of polypropylene. The sheet requires no packaging and additional pots and products would be offered. DIG brings the garden into the home and enables those who have balconies, window sills and small yards to grow plants and vegetables.