Light and Solar Energy

Here, we propose a class for Sunday Academy for 2016/17 academic year. The main focus of the class will be light and solar energy. We plan to include three experiments that will be done together with the students in conjunction with a power point presentation.

Experiment 1:

We will use an equilateral triangle prism to break light up into its constituent spectral colors (i.e. the colors of the rainbow)

Experiment 2:

By using filters of different colors, we will demonstrate that it is possible to add and subtract colors.

Experiment 3:

By using a solar cell car, we will demonstrate how solar cell’s work. By changing the intensity of light, we will show that the effect of the intensity of light on the energy produced by the solar cell. We will also use different colors with the same intensity to show that light with different color have different energy, i.e. blue vs red light. This part is correlated with Prof. Zhao’s class in the sense that the sun screens are designed to block ultra-violet light which packs more energy per photon.