

## *Optics Journal:* Editorial

Published 2014/11/01

©Optics Journal (2014)

ISSN: 1936-9808

Excerpt from: F. J. Duarte, *Laser Physicist* (Optics Journal, New York, 2012)©

# On the future

Here, I provide a wish list of what I would like to see in the future. Of course, this is a much easier exercise than trying to predict the future. This list goes roughly from the more obvious to the less obvious:

1. A wireless world dominated by secure free-space electromagnetic and/or narrow-linewidth laser communications.
2. Three dimensional image capture (3D cameras). Laser projection of high quality 3D images (either interferometric or holographic) from cell phones, cameras, tablets, etc (a bit like in science fiction).
3. Accurate computerized wireless medical diagnoses. Compact electro-optical sensors to measure and transmit basic biomedical parameters (similar to those long advocated by science fiction).
4. Sale of clean and healthy fast food.
5. Bloodless surgery, and bloodless amputations, via the correct, widespread, standard, and skillful, use of lasers.
6. Efficient repair of broken bones without the use of metal rods, metal plates, or screws.
7. Wide spread and standard use of quantum computational techniques by engineers: a new breed of quantum engineers.
8. Mach 10 air travel: LA – Sydney in about 2 hours, lets say.
9. The elimination of corruption.
10. Side-effect-free medications.
11. Oral medications to prevent, and cure, dementia.
12. A cure for type I diabetes, or at least, insulin in oral form.
13. Design and creation of microscopic, or nanoscopic, life forms that would feed on cancer cells and simply die, or exit the body, once cancer cells are depleted.
14. Description of all measurable physical phenomena via quantum mechanics.
15. Directed energy, and kinetic energy, weapons to protect the planet from possible collision course asteroids (first hinted during SDI days?).
16. Complete theoretical understanding of the weather. Accurate, and reliable, predictions of climatic conditions.
17. Control of the weather: induce rain in deserts; dissipate storms.
18. Space travel at luminal or superluminal speeds (long advocated by science fiction).
19. Learn to control, and even defeat, entropy.