



List of reading resources for NANOYOU dilemmas

Below is a list of specific papers that relate to the content of each dilemma. For additional general references on ELSA and safety topics refer to the Bibliography List for Module 1 of the NANOYOU Teachers Training Kit (in the Educator Sector of the www.nanoyou.eu website).

This list is a supporting resource for the NANOYOU Role Play Game and the NANOYOU Virtual Dilemma.

ICT nanosensor in food packages

Reports (free to download)

Report on nanotechnology in agrifood, ObservatoryNANO May 2009, download from <http://www.observatorynano.eu/project/document/2416/>

Agrifood Environment, Health and Safety (EHS) Analysis, ObservatoryNANO, August 2010, download from <http://www.observatorynano.eu/project/document/3306/>

Developments in Nanotechnologies Regulation and Standards, ObservatoryNANO, 2010, download from <http://www.observatorynano.eu/project/document/3253/>

Nanotechnology in Agriculture and Food, May 2006, European Nanotechnology Gateway (Nanoforum), download from

http://www.nanoforum.org/nf06~modul~showmore~folder~99999~scid~377~.html?action=longview_publication&

Risk Governance of Nanotechnology in Food and Cosmetics, 2008, IRGC Report, http://www.irgc.org/IMG/pdf/IRGC_Report_FINAL_For_Web.pdf

Research articles (paid subscription to journals required):

A. Mills, C. Tommons, R.T. Bailey, M. C. Tedford and P. J. Crilly, "UV-Activated Luminescence/Colourimetric O₂ Indicator", International Journal of Photoenergy, Volume 2008, Article ID 547301, 6 pages, doi:10.1155/2008/547301

N. Sozer and J. L. Kokini, "Nanotechnology and its applications in the food sector", Trends in Biotechnology, Vol.27, No.2, pp. 82-89.

J. Weiss, P. Takhistov and D. J. Mc Clements, "Functional Materials in Food Nanotechnology", Journal Of Food Science 2006, Vol. 71, Nr. 9, R107-R116.

D. Dainellia, N. Gontardb, D. Spyropoulosc, E. Zondervan-Van den Beukend and P. Tobbacke, "Active and intelligent food packaging: legal aspects and safety concerns", Trends in Food Science & Technology 19 (2008) S103-S112

Silver socks

Reports (free to download)

Silver Nanotechnologies and the Environment (PEN 15), Woodrow Wilson International Center for Scholars, Project on Emerging Nanotechnologies,
<http://www.nanotechproject.org/publications/archive/silver/>

"Advisory committee on hazardous substances report on nanosilver" 2009, Department for Environment Food and Rural Affairs (DEFRA), UK,
<http://www.defra.gov.uk/environment/quality/chemicals/achs/documents/achs-report-nanosilver.pdf>

Research articles (paid subscription to journals required):

S. Wijnhoven et al., "Nano-silver. A review of available data and knowledge gaps in human and environmental risk assessment", Nanotoxicology 2009, pp. 1-30.

T. Benn and P. Westerhoff, "Nanoparticle Silver Released into Water from Commercially Available Sock Fabrics", Environ. Sci. Technol. 2008, 42, 4133–4139

O. Choi et al., "The inhibitory effects of silver nanoparticles, silver ions, and silver chloride colloids on microbial growth", Water Research 2008, 42, pp. 3066 – 3074

GPS Jacket

Reports (free to download)

"The evolution of interactive textiles", Speciality Fabrics review,
http://specialtyfabricsreview.com/articles/0910_f2_interactive_textiles.html

D. Meoli and T. May-Plumlee, "Interactive electronic textile development", Journal of Textile and Apparel Technology and Management 2002, Volume 2, Issue 2, pp 1-12,
http://www.tx.ncsu.edu/jtatm/volume2issue2/articles/meoli/meoli_full.pdf

Solutions for new trade-off model privacy-security (Current trends in nanotechnology, ICT, privacy and security), Interview with Dr Silvia Venier, ObservatoryNano July 2010,

<http://www.observatorynano.eu/project/filesystem/files/ObservatoryNanoInterviewSilviaVenier150710.pdf>

Articles and book chapters (paid subscription required)

J. van den Hoven, "The Tangled Web of Tiny Things: Privacy Implications of Nano-electronics", in *Nanotechnology and Society*, 2009, III, 147-162, DOI: 10.1007/978-1-4020-6209-4_8

Nano Suncream

"A review of the scientific literature on the safety of nanoparticulate titanium dioxide or zinc oxide in sunscreens", Department of Health and Aging Therapeutic Goods Administration (TGA), July 2009,

<http://www.tga.gov.au/npmuds/sunscreen-zotd.pdf>. See also:

<http://www.tga.gov.au/npmuds/sunscreen-zotd.htm> (for a summary)

G.J. Nohynek, E.K. Dufour, M.S. Roberts, "Nanotechnology, Cosmetics and the Skin: Is There a Health Risk?" (A review), *Skin Pharmacology and Physiology* 2009, volume 21, pp 136-149

"Preliminary opinion on safety of nanomaterials in cosmetic products", Scientific Committee on Consumer Products (SCCP), 2007, European Commission,

http://ec.europa.eu/health/ph_risk/committees/04_sccp/docs/sccp_o_099.pdf

Articles from scientific journals (paid subscription required)

"The safety of nanosized particles in titanium dioxide- and zinc oxide-based sunscreens", *Journal of the American Academy of Dermatology* 2009, Volume 61, Issue 4 , pp. 685-692

D.M Derube, "Rhetorical gamesmanship in the nano debates over sunscreens and nanoparticles", *Journal of Nanoparticles Research* 2007, DOI 10.1007/s11051-008-9362-7

Exposure Assessment Approaches for Engineered Nanomaterials, L.C. Abbott, A.D. Maynard (JUL 2010), DOI: 10.1111/j.1539-6924.2010.01446.x

Super brain

"Be prepared for life with enhanced humans", *Current debates on Nanobioethics: Interview with Dr Daniela Cerqui*, July 2009, ObservatoryNano (Societal Ethics- NanoBiomedical Ethics),

<http://www.observatorynano.eu/project/document/3098/>

F. Berger et al., "Ethical, Legal and Social Aspects of Brain-Implants Using Nano-Scale Materials and Techniques", *Nanoethics* 2008, DOI 10.1007/s11569-008-0044-9

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 233433

I. Malsch and K. Hvidtfelt-Nielsen, "Nanobioethics", ObservatoryNano 2nd Annual Report on Ethical and Societal, Aspects of Nanotechnology, April 2010,

<http://www.observatorynano.eu/project/filesystem/files/NanobioethicsApril2010.pdf>

Book Chapter

"Medical Nanotechnology" in "Fundamentals of Nanotechnology", CRC Press 2009, ISBN -13:978-1-4200-4803-2

Revolution for the light bulb

Reports (free to download)

"Quantum-dot displays could outshine their rivals", New Scientist, December 2007,

<http://www.newscientist.com/article/dn13023-quantumdot-displays-could-outshine-their-rivals/>

L. K. Breggin & J. Pendergrass, "Where Does the Nano Go? End-of-Life Regulation of Nanotechnologies (PEN 10), July 2007,), Woodrow Wilson International Center for Scholars, Project on Emerging Nanotechnologies, http://www.nanotechproject.org/publications/archive/pen_10_-_where_does/

Journal articles and reviews (paid subscription required)

M.J Bowers II *et al.*, "White-light emission from magic-sized cadmium selenide nanocrystals", Journal of the Chemical Society (Communications) 2005, 127, 15378-15379

Q. Sun *et al.*, "Bright, multicolored light-emitting diodes based on quantum dots", Nature Photonics 2007, 1, 717-722

J. Lee *et al.*, "Full color emission from II-VI semiconductor quantum dot-polymer composites", Advanced Materials 2000, 12 (15) 1102-1105

R. Hardman, "A toxic review of quantum dots: toxicity depends on physiochemical and environmental factors", Environmental Health Perspectives 2006, 114 (2) , 165-172.

The "Internet of things"

Reports (free to download)

"Scenarios for ambient intelligence 2010", February 2001 IPTS-Seville, European Commission

<ftp://ftp.cordis.europa.eu/pub/ist/docs/istagscenarios2010.pdf>

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 233433

M. Alcañiz, B. Rey, "New Technologies For Ambient Intelligence", Ambient Intelligence, G. Riva, F. Vatalaro, F. Davide, M. Alcañiz (Eds.), IOS Press, 2005, <http://www.ambientintelligence.org>,
http://www.neurovr.org/emerging/book5/01_AMI_Alcaniz.pdf

Solutions for new trade-off model privacy-security (Current trends in nanotechnology, ICT, privacy and security), Interview with Dr Silvia Venier, ObservatoryNano July 2010,
<http://www.observatorynano.eu/project/filesystem/files/ObservatoryNanoInterviewSilviaVenier150710.pdf>

Journal articles and reviews (paid subscription required)

M. Lindwer et al., "Ambient intelligence visions and achievements: linking abstracts ideas to real-world concepts", Proceedings of the Design, Automation and Test in Europe Conference and Exhibition (DATE'03), <http://doi.ieeecomputersociety.org/10.1109/DATE.2003.10173>

J. van den Hoven, "The Tangled Web of Tiny Things: Privacy Implications of Nano-electronics", in Nanotechnology and Society, 2009, III, 147-162, DOI: 10.1007/978-1-4020-6209-4_8

Nanosensors in medical diagnostics

Reports (free to download)

I. Malsch and K. Hvidtfelt-Nielsen, "Nanobioethics", ObservatoryNano 2nd Annual Report on Ethical and Societal, Aspects of Nanotechnology, April 2010,
<http://www.observatorynano.eu/project/filesystem/files/NanobioethicsApril2010.pdf>

NanoFrontiers- On the horizons of medicine and healthcare, May 2007, Woodrow Wilson International Center for Scholars, Project on Emerging Nanotechnologies,
http://www.nanotechproject.org/process/assets/files/2702/188_nanofrontiers_newsletter.pdf

Observatory Nano Project Reports, Scientific and technological trends: medicine, healthcare and nanobio, <http://www.observatorynano.eu/project/catalogue/2HM/>, 2009. The following subtopics are covered: cosmetics; diagnostics; novel bionanostructures; implants; surgery and coatings; theurapeutics; regenerative medicine.

Solutions for new trade-off model privacy-security (Current trends in nanotechnology, ICT, privacy and security), Interview with Dr Silvia Venier, ObservatoryNano July 2010,
<http://www.observatorynano.eu/project/filesystem/files/ObservatoryNanoInterviewSilviaVenier150710.pdf>

Journal articles and reviews (paid subscription required)

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 233433

T. Vo Dinh, "Nanosensors and biochips: frontiers in biomolecular diagnostics", *Sensors and Actuators B: Chemical* (2001), Volume 74, Issues 1-3, pp. 2-11

T. Kubik, K. Bogunia-Kubik and M. Sugisaka, *Nanotechnology on duty in medical applications*, *Current Pharmaceutical Biotechnology* 2005, 6, 17-33.

Cancer therapy with gold nanoparticles

Observatory Nano Project Reports, Scientific and technological trends: medicine, healthcare and nanobio, <http://www.observatorynano.eu/project/catalogue/2HM/>, 2009. The following subtopics are covered: cosmetics; diagnostics; novel bionanostructures; implants; surgery and coatings; theurapeutics; regenerative medicine.

Journal articles and reviews (paid subscription required)

C. Medina, M.J. Santos-Martinez, A. Radomski, O.I. Corrigan and M.W. Radomski, *Nanoparticles: pharmacological and toxicological significance*, *British Journal of Pharmacology* 2007, 1-7

R. Duncan, *Polymer conjugates as anticancer nanomedicines*, *Nature Reviews*, 2006, 6, 688-701

C. Loo *et al.*, "Nanoshell-Enabled Photonics-Based Imaging and Therapy of Cancer", *Technology in Cancer Research & Treatment* (2004), Volume 3, Number 1, pp. 33-40

Analysis of the toxicity of gold nano particles on the immune system: effect on dendritic cell functions", *Journal Of Nanoparticle Research* (2009) Volume 12, Number 1, pp.55-60, DOI: 10.1007/s11051-009-9692-0

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