

Accepted Manuscript

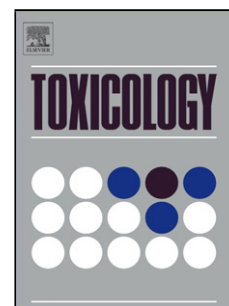
Title: Balancing nanotoxicity and returns in health applications: The Prisoner's Dilemma

Authors: D.A. Gkika, L. Magafas, P. Cool, J. Braet

PII: S0300-483X(17)30338-4
DOI: <https://doi.org/10.1016/j.tox.2017.11.008>
Reference: TOX 51976

To appear in: *Toxicology*

Received date: 21-9-2017
Revised date: 4-11-2017
Accepted date: 6-11-2017



Please cite this article as: Gkika, D.A., Magafas, L., Cool, P., Braet, J., Balancing nanotoxicity and returns in health applications: The Prisoner's Dilemma. *Toxicology* <https://doi.org/10.1016/j.tox.2017.11.008>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Balancing nanotoxicity and returns in health applications: The Prisoner's Dilemma

D. A. Gkika^{1,2*}, L. Magafas³, P. Cool⁴, J. Braet¹

¹University of Antwerp, Applied Economics, Department of Engineering Management, Antwerp, Belgium

²Eastern Macedonia & Thrace Institute of Technology, Hephaestus Advanced Laboratory, Kavala, Greece

³Eastern Macedonia & Thrace Institute of Technology, Electrical Engineering Department, Kavala, Greece

⁴University of Antwerp, Department of Chemistry, Antwerp, Belgium

*Corresponding Author

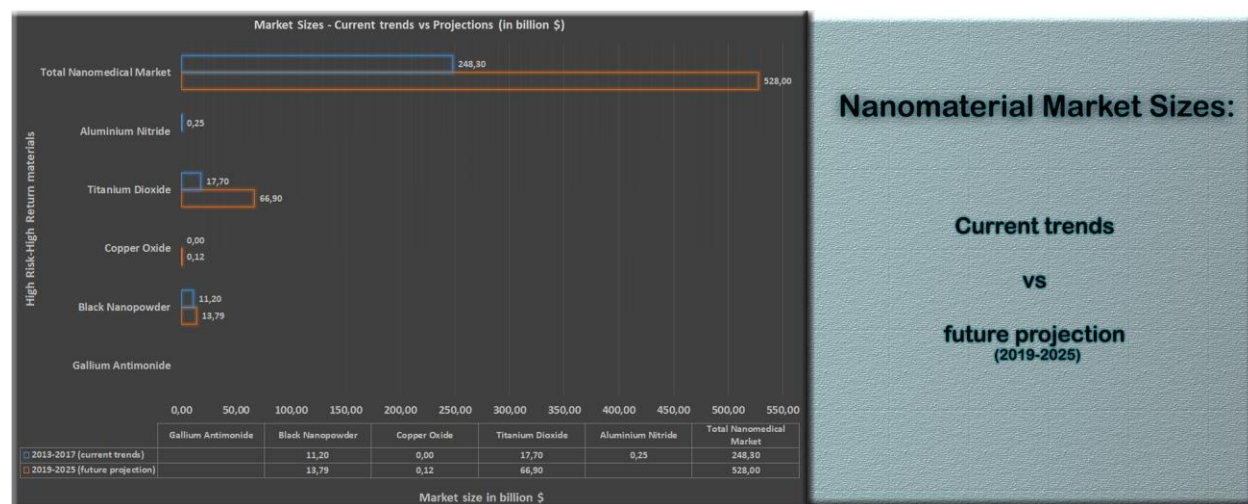
D. A. Gkika

A: Prinsstraat 13, 2000, Antwerp, Belgium

T: 0030 6973568531

E:despinagkika@gmail.com

Graphical abstract



Abstract

Over the past 30 years, there have been significant advancements in the field of nanomaterials. The possibility to use them in applications such as cancer treatment is extremely promising; however, the toxicity of many nanomaterials as well as the high costs associated with their use is still a concern. This paper aims to study the connection between nanomaterial toxicity and cost. This synergy may be interpreted as a different version of the classic "Prisoner's Dilemma" game, which in this case attempts to explain the possible outcomes of cooperation versus conflict between science advocating for the use of high-risk, possibly toxic materials due to their high returns, and society that might be dubious about the use of high-

Download English Version:

<https://daneshyari.com/en/article/8552914>

Download Persian Version:

<https://daneshyari.com/article/8552914>

[Daneshyari.com](https://daneshyari.com)