



Universiteit
Leiden
The Netherlands

Developmental effects of polystyrene nanoparticles in the chicken embryo

Wang, M.

Citation

Wang, M. (2024, January 16). *Developmental effects of polystyrene nanoparticles in the chicken embryo*. Retrieved from <https://hdl.handle.net/1887/3704678>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

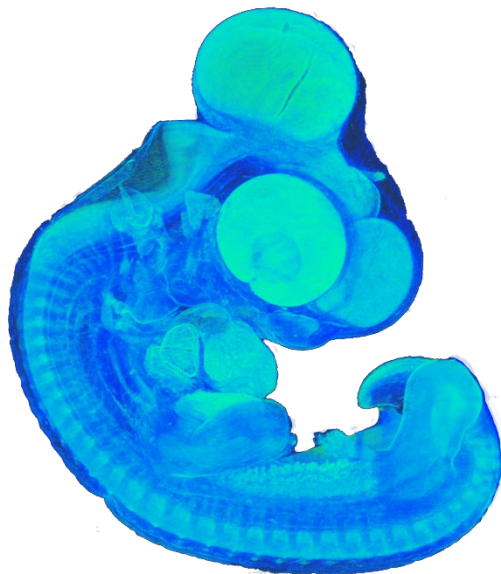
Downloaded from: <https://hdl.handle.net/1887/3704678>

Note: To cite this publication please use the final published version (if applicable).

Developmental effects of polystyrene nanoparticles in the chicken embryo

Meiru Wang

王美儒



Printing: Ridderprint (www.ridderprint.nl)

Developmental effects of polystyrene nanoparticles in the chicken embryo.

Meiru Wang.

PhD. Thesis, Institute of Biology, University of Leiden, The Netherlands

Layout by Meiru Wang and Ridderprint.

Developmental effects of polystyrene nanoparticles in the chicken embryo

Proefschrift

ter verkrijging van

de graad van doctor aan de Universiteit Leiden,

op gezag van rector magnificus prof.dr.ir. H. Bijl,

volgens besluit van het college voor promoties

te verdedigen op dinsdag 16 januari 2024

klokke 13:45 uur

door

Meiru Wang

geboren te Changchun, China

in 1993

Promotores:

Prof. dr. M. K. Richardson

Prof. dr. M.G. Vijver

Promotiecommissie:

Prof. dr. A.H. Meijer

Prof. dr. M. de Rooter (LUMC)

Dr. M. Rücklin (Naturalis)

Prof. dr. A. Briegel

Dr. K. Riebel

Prof. dr. N. Wierckx (Forschungszentrum Jülich GmbH)

Table of Contents

Chapter 1. General introduction.....	7
Chapter 2. Developmental toxicity of nanoplastics in the chicken embryo	27
Chapter 3. Nanoplastics cause cardiac malformations and abnormal circulation in chicken embryos	51
Chapter 4. Nanoplastics passive target neural crest cells in the chicken embryo	77
Chapter 5. Summary, discussion and perspective.....	125
Nederlandse Samenvatting.....	137
Curriculum vitae.....	143
List of publications	145

