



Universiteit
Leiden
The Netherlands

Squaramide-based supramolecular materials for 3D cell culture applications

Tong, C.

Citation

Tong, C. (2021, March 10). *Squaramide-based supramolecular materials for 3D cell culture applications*. Retrieved from <https://hdl.handle.net/1887/3151624>

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/1887/3151624>

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

Cover Page



Universiteit Leiden



The handle <https://hdl.handle.net/1887/3151624> holds various files of this Leiden University dissertation.

Author: Tong, C.

Title: Squaramide-based supramolecular materials for 3D cell culture applications

Issue Date: 2021-03-10

Squaramide-based supramolecular materials for 3D cell culture applications

PROEFSCHRIFT

ter verkrijging van

de graad van Doctor aan de Universiteit Leiden,

op gezag van Rector Magnificus Prof.dr.ir. H. Bijl

volgens het besluit van het College voor Promoties

te verdedigen op woensdag 10 maart 2021

klokke 15 : 00 uur

door

Ciqing Tong

Geboren op 17 Juli 1989, Zhejiang, China

Promotiecommissie

Promotor: Prof. dr. A. Kros

Copromotor: Dr. R.E. Kieltyka

Overige leden:

Prof. dr. H.S. Overkleeft (voorzitter), Faculty of science, LIC

Prof. dr. S.A. Bonnet (secretaris), Faculty of science, LIC

Prof. dr. E.H.J. Danen, Leiden Academic Centre for Drug Research (LACDR)

Prof. dr. G. Fernández, University of Münster

Prof. dr. H.F. Sleiman, McGill University

Cover Design: Ciqing Tong

Printing: Printsupport4U

To my friends and family

Table of Contents

Chapter 1	7
Introduction	
Chapter 2	33
Squaramide-based supramolecular materials for three-dimensional cell culture of human induced pluripotent stem cells and their derivatives	
Chapter 3	73
On-demand light-activated stiffening of a multicomponent supramolecular material to direct cellular behavior in 3D	
Chapter 4	135
Photoactivation of latent 1,2-dithiolanes to engineer self-recovering and patterned hydrogels for 3D cell culture	
Chapter 5	179
Photo-activated double networks based on one-dimensional supramolecular and covalent polymers for 3D chondrocyte culture	
Chapter 6	217
Summary and perspectives	
Samenvatting	223
Curriculum Vitae	227
List of publications	229
Acknowledgements	230

