Chromism of spiropyrans

Kortekaas, Luuk

CHROMISM OF SPIROPYRANS

From solutions to surfaces

Luuk Kortekaas

university of groningen / faculty of science and engineering

The work described in this thesis was carried out at the Molecular Inorganic Chemistry department of the Stratingh Institute for Chemistry, University of Groningen, The Netherlands.

The work reported in this thesis was supported financially by the Ministry of Education, Culture and Science (Gravitation program 024.001.035).

Research Center for Functional Molecular Systems

Gravitation Program - The Netherlands

Printed by: Ipskamp Drukkers, Enschede, The Netherlands

Cover artwork: "Herakles the Archer" by Antoine-Émile Bourdelle, as on view at the Metropolitan Museum of Art in New York City.

ISBN: 978-94-034-0720-3 (printed version)

ISBN: 978-94-034-0719-7 (electronic version)

university of groningen

CHROMISM OF SPIROPYRANS

From solutions to surfaces

PhD thesis

to obtain the degree of PhD at the
University of Groningen
on the authority of the
Rector Magnificus Prof. E. Sterken
and in accordance with
the decision by the College of Deans.

This thesis will be defended in public on

Monday the 25th of June 2018 at 11.00 hours

by

Luuk Kortekaas

born on the 13th of May 1990
in Tiel, the Netherlands

Supervisors
Prof. Dr. W.R. Browne
Prof. Dr. B. L. Feringa

Assessment committee
Prof. Dr. S. E. J. Bell
Prof. Dr. M. Venturi
Prof. Dr. S. Otto

Table of Contents

Chapter 5 - Proton Stabilized Photochemically Reversible *E/Z* Isomerization of Spiropyrans

Chapter 6 - Novel Reactivity in Bispiropyran Photochromes

Chapter 7 - Redox-Chemistry of Bispiropyrans

Dedicated to my parents

My unending support