Exploring coordination chemistry and reactivity of formazanate ligands
Travieso Puente, Raquel

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2017

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):

Copyright
Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Download date: 04-02-2020
Acknowledgments

Apart of the 7 Chapters written previously, I will share other aspects of my PhD that make me proud of what I did, how many people I met, the experiences, and how much I grew. It's impossible to thank everyone that I met during this unforgettable 4 years, but I want to mention those who shared the moments bombarding my memory now.

My career as a chemist started when I decided that I would be a chemist, obviously, but a difficult and important choice. Thus, the first person I would like to acknowledge is Cardi, who influenced my path and believed in me as a chemist, having no doubts that I will do a great BSc. Thanks for the nice talk and confidence in my career as a chemist.

Esther García and Miguel Angel Ruiz, thank you for selecting me to do my MSc in your group. Daniel García Vivó, thanks for all your patience and good character during my first time in a research laboratory and starting a new project involving only both of us. I learned a lot from you and I enjoyed an intense year. Miguel Huertos, thanks for the moments in Oviedo and Oxford and for opening my eyes and my curiosity to try another way of doing research. Special mention to Alberto Ramos, you were the other Post-doc in the group, but much more for me, you were with the one I could talk for hours about chemistry and general curiosities, and inspired me to change my path :) I will always be grateful for that.

This brings me already to Groningen. Thus, I would like to thank first, Edwin, who made it possible for me to be defending today my PhD here. The beginning was not easy, but despite the differences on doing research in Spain and Netherlands and my language barrier, you trusted me from the beginning and gave me freedom in the lab and the courses I instructed. Thanks also for supporting my month and a half conference tour, an unforgettable experience. You know how to adapt to the different personalities and backgrounds and create a friendly lab atmosphere. For that, and for your constant positive reinforcement I am really grateful. In these years I grew not only as a chemist, but also your reinforcement made me grow as a professional and person. I will be forever indebted to you.

I want to thank my reading committee for reading, provide valuable suggestions, and approving my thesis (Prof. Ben L. Feringa, Prof. Wesley R. Browne, Prof. H-J Krüger). Also to Prof. Adriaan J. Minnaard, Prof. Bas de Bruin, Prof. Katalin Barta, Dr. Paolo P. Pescarmona and Dr. Wiktor C. Szymanski for accepting to be part of my opposition on my defense day.

Ben, unfortunately you will not be in the opposition committee but I would like to thank you for the talks and workweeks that we shared and our coincidental friends in
common. I am glad to know that a Nobel laureate has nice personal values behind the chemistry success.

Wes, I learned to do not trust first impressions with you. As scared I was when I knew you would be the head of the Inorganic Department, I quickly became grateful for our meetings. It was a pleasure to get to know you outside the Thursday morning talks (werkbespreking). You were always available and willing to help and explain whatever was needed. I learned to defend my conclusions in front of anyone (even with the nastiest questions). I enjoyed your wittiness and jokes.

Paolo, at the end unfortunately our collaboration did not go forward, but it was enough to make me realize that my next step would be in polymer chemistry.

Wiktor, I met you at the very beginning of my PhD and we shared many borrels and some other moments. I am glad to have you today on the other side as one of my opponents. All the best in your future.

To my dear paranymphs, Francesca Milocco and Ana Rioz. Fra, I was the only girl in the lab for 3 years. Edwin was waiting for the perfect one to come, so you came. It was a pleasure to work with you: great chemist, charming, helpful, direct, organized, among other things. Still even better outside of the lab. I am glad I met you, although it was a pity we could share only less than a year together. All the best in your professional and personal life.

I could not do all that is included in this thesis without the help of many people. Thus, I would like to thank Peter Roewen, Onno Broekman, Juan Chen, Serhiy Demeshko, Franc Meyer, Simon Budzak, Denis Jacquemin, Johann T. B. H. Jastrzebski and Peter Stacko. Outside of collaborations but involved in the results of this thesis: Albert Woortman, Oetzé, Johan Luchies (although you were not sharing my excitement when I was getting nice crystals, we shared many nice laughs and talks), Theodora, Monique, Alphons and Cristina. Also to you Tineke, you are the charming secretary every group would dream to have. Special thanks to Pieter van der Meulen, I don't know how many hours we spent in the NMR room, always patient, available, and ready to help and develop new experiments. I really enjoy all these hours with all the tricks and helpful insights. Probably my last NMR and the most exciting by far was the LED irradiation inside of the NMR tube, together with the LEGO set up you showed me once. You are a wonderful professional.

To all my students. Peter, who made huge contributions in Chapter 3, Aukse, Albert, Onno (Chapter 7), Kaspars and Hanneke (you have all that is needed for a good chemist). All the students of inorganic chemistry who created a great atmosphere in Edwin's Angels lab (Johan, Folkert, Rahul, Jelte, Dan and Linda). The following PhDs, Ranajit and Beibei, all the best through this journey. And to all MOLAN group (Francesco, Appu, Davide Angelone, Sandeep, Duenpen, Juan Chen, 204
Shaghayegh, Pat, Jorn, Luuk, Jiajia, Emma). Also to all my first year Inorganic Chemistry tutorial students, with who I extremely enjoyed teaching, which is one of my passions. Special mention to few students: Katrin (you will end up in a business roll), Sander, Tom Knobbe, Roos van Lier, among others.

To the first PhD in the group, Mu-Chieh. Edwin could not have chosen a better chemist and colleague to start the group with. In return of all your hard work, you received the 2016 Backer-KNCV prize– so proud of you and Edwin. It was a pleasure to be the second PhD and build up together the group and the chemistry. We were the first two children of Edwin, the boy and the girl, both so different that we could provide all that was needed to have a great group (or at least we tried our best). Thanks for all the talks and tricks, it was a pleasure to work with someone so smart and so cordial like you. Thanks also for proof-reading my thesis. I wish you all the best in your professional career, although I am sure it will be as successful as your PhD.

Douwe (mi dousirik) and Mr. Wonink (mi marcuchi), you were more than students to me. I learned together with you. We shared many more things than the office (beer festivals, various parties, dinners, serious talks about family and life, trips, my first farm-experience and many more). I am sure that soon we will have you visiting in Spain. Douwe, you have a sincere nice heart. Don't change. Marco, no silence and time to get bored when you are around, best opera singer in the lab, and the most spontaneous person I ever met, keep on spicing up every moment you share with people. I definitively miss you guys.

Moving to a new country, new language, and new way of working for most of the people is not easy. Fortunately, for me it was. It was thanks to Seb and Claudia who without knowing me offered me to stay with them for two months (me and my luggage :p ). It was a true joy to share with you so many moments, especially in the kitchen, where a French, Italian, and Spanish combination was quickly noticeable in my belly and in my happiness. You are a true sweet couple full of optimism and made any moment around you enjoyable. Thanks for your recent visit to our new place in Spain, this was one more of many moments we will share in the future.

Johanne, also thank you for making easier my first weeks in the lab, by being my official translator in the group meetings at the beginning of my PhD.

Wassenberghstraat, so many amazing memories on this street. I went by myself and soon after I met who would be my family in Groningen. Rico, Bernardette, Lisa, Niek, and Irena, thanks for the countless moments and meals that we shared. Rico and Bernardette, thanks for visiting and meeting all my family in Ponferrada. Irena, thanks for being such a spiritual, lovely, and caring person. I will keep you always in my heart.
Ana Rioz, you were the last piece that completed the greatness of the street. You came as a roommate but only you and I know all that happened in that house: countless parties, chats, coffees, nights and weekends working, dancing, laughing in the floor, repairing pipes, bathtubs and many more things that we keep for ourselves. Everyone loves you for a reason, a unique heart and sincere empathy, always helping not only friends but everyone. I could dedicate pages here because together with Matt you are the best gift that Groningen gave me. You will be always the older sister I never had. I will be always here for you.

Lorina, you contribute to the memories of this house for a few months. I did not know you and when I met you I did not expect that we would get along so well living together, but we sure did :) with our ID shows, Ben&Jerry’s, coffees, long chats in the couch, and many more made a special connection between us. I am really glad that I got to share these moments with you.

I didn't live with you guys but you are also a big contribution to my life. Matea, we got to know each other deeper through organizing the workweek. I didn't know that a person could have so much energy, learn so many languages, and be involved in so many things at the same time. My chili pepper, I am glad of our true friendship and I look forward to share many more memories in many more countries with our families and with your 10+ children :p Krzys, take care of each other and continue keeping the balance between both of you, you are a couple that is rare to find.

I found many activities during my PhD to keep me busy and rest my mind. Thus, I would like to start thanking my tennis crew: Bilal, Diego, Erik and Lucas in the first year and Juanfer in the last one. Bilal, you are the first Pakistani friend I had and the only one till now, I learnt a lot about your culture. You have a nice heart and gave me valuable advice at the beginning of my PhD, which I carried with me through all these 4 years. I remember when you left how down I was, still today I hope I will see you again. God bless you and your family. Diego, half-dutch half-spanish, switching nationalities in your convenience. You, together with Bilal, were a big support at the beginning. Never forget 'este animal de bellota'. Juanfer, you were a great contribution to Syuzanna's group and all the Stratingh in the last years, I specially enjoyed the beer and talks after the tennis matches.

Davide Fracasso, you were the only one in the other groups in the corridor smiling in the morning. It was a pleasure with you during the coffee breaks, dinners, and talks. Thanks for introducing me to the climbing world and for your sincere friendship.

Also thanks for the climbing crew at the beginning (Davide Bartesaghi, Angela, Jort and Toni) and also at the end (Manu, Cora, Ivana and Elisa) of my PhD.

Another activity I started during my PhD (then dropped it for lack of time and now taking it back again) was playing guitar. Johnny (Jiawei Rong), you did the course
with Matt and I and I was fascinated how you broke all my doubts of a Chinese
playing guitar. Actually, I think you must have Spanish roots, great playing
guitar and a must in any borrel/party. It was great to share many moments
with you. All the best to you and Sabrina.

To all Stratingh for the amazing atmosphere and collaboration between the
different groups, especially thanks to those who made easier the end of the
week in the borrels. Carlos, there was no party without you and your hairy
chest. Johnny, you were the perfect combination with Carlos. Emma, you were
adding to this too, what is a party without you? Although I did not understand
any word when I met you at first, you became an important contribution to
my time in Groningen. To all who contributed to the amazing borrels:
Andrea-Nekane, Boris, Ruben, Tao, Giovanni, Peter Deuss, Miriam,
Francesca Caprioli, Tiziana, Ugo, Piotr, Andreas Hussain, Mamen,
Juanfer, Cicco, Simone, Johny, He Sun, Varsha, Ravindra, Pablo, Tilde,
Laurie, Jana Volaric, Jefrey Buter, Dorus, Filippo, Massimo, Pat, Carlos,
Valentin, Malgorzata, Clau, Seb, Michael, Viktor, Milton Mondal,
Suresh Babu, Wim Velema, Elvira, Arne, Brenda, Suzan, Hemant,
Dana, Marzena, Mohamed, Elisa, Nina, Wen, Max, Nikola, Ana Toplak,
Hugo, Clemens, Jakub (kuba), Friso, Willem, Antonija, Misun...

To my second group, Gerard's lab, my girly group, thanks for all the BBQs,
movie nights, chats, gossips, coffees, borrels, dinners, parties, trips, saunas,
etc. Thanks: Manu, Ivana, Nathalie, Sambika, Cora, Lara, Ana, Annika,
Dowine, Liliana, Annika, Nathalie.

To all polymer department, specially to Graham, Valeria, Esteban, Rodrigo,
Laurens, Léon, Patrizio and specially to Arjen for being always in a good mood
and willing to help with the GPC.

To 51.18.01 corridor: Thomas, Jenny, Yanxi Zhang, Marco and Li Quiu.

To many others who I met along the way: Ashmir (Papi chulo), Morsal,
Arnold Boersma, Cristina Wegeberg, Carla Casadevall, Tania Morán,
Marius Tarrés, Romina...

To all Spanish-Italian crew and the thursday evenings in 'el amigo' (Carlos,
Valentín-Puri, Sara-Lucas, Héctor-Malgoská, Eduard, Sara-Pablo, Ana del
Hoyo, Ani, Ana de las Heras, Sergio, María Jesús, Patrizio, Luca and
Emanuele Bignardi, Manu, Marta, Giulia, Tilde, Pablo, Javi, Mauricio,
Tano, Ralph (Ralph you were everywhere in every group but I include you here
eventhough you are not Spanish nor Italian, but always in the amigo).

Stefanof Messina, I would never forget the homemade pizzas you made and such a
great father you are with always a smile on your face.
To Ana, Manu and Hanna who knew before I did that Matt was the perfect match for me. I forever grateful to you girls. Hanna you are one of the most caring, charming, welcoming person, thanks for all the dinners and the Espanish parties.

To Hesam and his family, your positivity is helping you to overcome a difficult situation. But think that this will make you enjoy life more than any of us. Soon you will be enjoying, as you deserve it. You have a bright-happy future heading you. All the best Sir.

To Kamil, you are the most genius person I ever met. Thanks for taking Matt in this exciting business journey. I have seen Peptone growing and I can't wait to see lies ahead for you guys. All the best and always keep it cool.

To Geartruda, for your understanding when we kept Edwin late at work and for welcoming us in several BBQs and soccer matches. All the best for the cute family you have.

To Ecopol Tech S. L. who gave me the opportunity to enter in the world that I was waiting for, polymer chemistry. To all the nice colleagues who created a great working environment and make everything easier.

Para toda la panda de la manivela de la pisci de molina, en especial a Irvo, Malu, Enci, Chego y Carlines por todos esos veranos y fiestas que hemos pasado y nos quedan por pasar.

A tod@s mis amig@s de Ponferrada quienes habéis estado ahí siempre (Fefi, Mari, San, Ele, Leti, Ali y Ángela). Especialmente a ti, Cris, siempre apoyando y pendiente de todo, Gary ha sabido elegir bien porque no quedan ya chicas como tú. También a ti, Lucia (click click).

To my beloved family: Abuela, Roberto & Tito & Diegui, M. Jesús; Sonia & Carlos; Lilia & Fonti & Marina & Marta; Oscar & Raquel & Rodri & María; Bea & Celso & Carlota & Mateo; Belu & tito Al & Guille & Javier; Miguel & Vero & Samu & Iria. A vosotros que sois como de la familia: Pili & Carlos & Sergio & David. Que serían de los veranos, navidades y festividades varias sin todos vosotros. Estoy tan orgullosa de tener una familia tan grande y tan unida con la que compartir tantos momentos como los que hemos vivido (y nos quedan por vivir). A seguir unidos siempre en lo bueno y en lo malo. También a Chema & Bego por estar presentes en un día tan importante para mí y por vuestra amistad con Roberto.

A mi otra mitad, Eli, con la que he compartido tantos y tan importantes momentos desde que nacimos. No sé que haría sin ti, eres como un terremoto lleno de sarcasmo que alegra todo lo que compartimos. Gracias por haber venido un año entero a
Groningen a acumular más momentos juntas. Vas a brillar como profesora porque ya lo has hecho en el pasado. Este va a ser tu año pequeña Olsen. Te Quiero.

El tercero que completa el trío, Mario, tú siempre has sido el mayor con todo lo que eso conlleva. Hemos vivido también muchos momentos juntos, bailes en la sala, CIMA, palé, gogos, chapas, carnavales, santos inocentes, noche viejas, y muchas más siempre con bromas y la alegría que te caracteriza. Nunca pierdas eso. Tienes un buen corazón que no se corresponde con lo que hay en este mundo así que usa toda la buena personalidad que tienes para hacer lo que quieras, aunque la vida no sea fácil hay que juntar todo lo positivo para tirar para adelante. Hay momentos buenos y malos en la vida pero la familia siempre estará ahí para todos ellos, yo por lo menos. Te Quiero.

Y para ti, Abuelo, que siempre nos inculcaste la disciplina, constancia y cultura (cómo me gustaría que estuvieses hoy aquí).

Para ti, Roberto, por todo lo que me has enseñado y dado incondicionalmente. El padre que todo hijo desearia y que yo tuve la suerte de disfrutar. Te deseo toda la felicidad que te mereces en el futuro. Gracias por todo.

A la persona más influyente en mi vida, a ti Mamá, a ti he dedicado la tesis por todo lo que has dado por nosotros, por tu esfuerzo constante y por tu buen humor ante cualquier adversidad. Por ser una madre modelo e inculcarnos valores reales de los que escasean. Gracias por todo, de corazón, siempre estaré en deuda contigo porque todo esto que he conseguido es gracias a todo tu esfuerzo y sacrificio. Sólo pido muchos años de salud para que disfrutes de todo lo que te mereces. Te Quiero.

To my family in-laws for accepting me like a daughter and making me feel at home when visiting you. Especially Dan & Vero, for your huge support and understanding. I wish you years of health to enjoy together all that you deserve.

To you, Matt, Hanna, Anna and Manu were right, you are the perfect match for me and I did not need much time to realize. We have been through many adventures together, good and bad, but we know how to support each other. Your positivity and your serenity is my perfect complement. Thanks for taking care of everyone around you, for making my days, for being yourself and for making every little thing special. This has just started, we have still a long journey ahead of us, together. Te Quiero.

To the two fathers, who are taking care of us wherever they are; Jose María (Travi), unfortunately you are missing this moment and you have missed many more but I am sure you are taking care of us, and you, Michael Heberling, I am glad I got to meet you so I could promise you something that I will take care of as good as I can.

To all of you. Sincerely Thanks.

Raquel Travieso Puente
"La diferencia entre quién eres y quién quieres ser es lo que haces"
“The difference between who you are and who you want to be is what you do”

~ Bill Phillips ~

"Ser libre no es solamente desamarrarse las propias cadenas, sino vivir en una forma que respete y mejore la libertad de los demás"
“For to be free is not merely to cast off one’s chains, but to live in a way that respects and enhances the freedom of others”

"La educación es el arma más potente para cambiar el mundo"
“Education is the most powerful weapon which you can use to change the world”

"Una buena cabeza y un buen corazón son siempre una combinación formidable"
“A good head and a good heart are always a formidable combination”

"Siempre parece imposible hasta que se hace"
“It always seems impossible until it’s done”

"Debemos usar el tiempo sabiamente y reconocer que siempre es el momento para hacer el bien"
“We must use time wisely and forever realize that the time is always ripe to do right”

~ Nelson Mandela ~