

Acknowledgements

I'd like to thank my supervisor, Professor Duncan Graham, for giving me this opportunity to 'make a difference' and for all his help and advice throughout this project.

Thanks go to all my colleagues in the Graham group; in particular to amazing Andrew Ingram, to Jennifer Dougan for all her help and advice and for getting me 'Lost' in 'The Gilmore Girls', to Fiona McKenzie for her expertise in functionalising gold nanoparticles and for her lovely comments on my wardrobe, to Colette Dalton, without whom the work on biocatalysis of the Diels-Alder reaction would not have been possible and, together with Jane Gallagher, the ARF would not have been bearable and to 'the other' Victoria Crawford for loving DNA and Primark as much as me. Thanks to everyone else in R 5.34 for the banter.

Thank you also to my colleagues at the Royal Society of Chemistry for listening to nothing but thesis chat for the last six months and for all their encouragement. Thanks to Rachel, Keith, Danny, Dylan and Yula for the same.

Thanks to Phil, Jan, Jim and Margaret for their encouragement and being so genuinely interested in my research.

A massive, massive thank you to my dad (and the bank of dad!), my mum, Lorna and Joanna for all their love and support throughout the nine years now that chemistry has taken over my life - for helping me move out and then back in to Foxes Grove numerous times and for all the kind, supportive words when I thought it was never going to end.

To my fellow pink lady Sarah Brown, there are not thanks enough for all the belly laughs, for being the best housemate ever, for cheering me up when the chemistry was bad, and when missing Tony made it worse, and most of all for all the cups of tea and the bacon rolls and the chocolate and the cakes. Second only to being called 'Dr.', the best thing to come out of this PhD was my friendship with you.

To Tony, thank you so much for everything. Your love and support has been endless, you've coped with the chemistry chat, the highs and the lows amazingly.