

University of Groningen

## Photothermal nanoparticles for the control of infectious biofilms

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## Propositions

### “Photothermal Nanoparticles for the Control of Infectious Biofilms”

Ruifang Gao

1. Nanotechnology is the solution for novel infection-control strategies. (This thesis)
2. PDA-NPs are highly effective in photothermal killing of a wide variety of bacterial strains and species. (This thesis)
3. Evaluating photothermal nanoparticles as a novel infection-control strategy requires suitable *in vitro* models. (This thesis)
4. The combined effect of targeting and localized near-infrared irradiation prevents collateral tissue damage. (This thesis)
5. Before clinical translation, animal experiments are the key to determine whether deeper infections can benefit from photothermal eradication. (This thesis)
6. Photothermal nanoparticles in pH-responsive micelles are one step closer to clinical application. (This thesis)
7. Photothermal treatment of biomaterials-associated-infections with near-infrared irradiation *in vivo* remains a challenge. (This thesis)
8. Human pathogens are excluded from the definition of thermophiles. (DOI: 10.1152/physiol.00066.2013)
9. Enjoying all the things in your life, no matter good or bad, is your own responsibility.
10. Try not to become a man of success, but rather try to become a man of value. (Albert Einstein)
11. There are no shortcuts to any place worth going. (Beverly Sills)