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## Sustainable pathways to bio-based amines via the 'hydrogen borrowing' strategy

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DOI:  
[10.33612/diss.135979053](https://doi.org/10.33612/diss.135979053)

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

*Publication date:*  
2020

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*  
Afanasenko, A. (2020). *Sustainable pathways to bio-based amines via the 'hydrogen borrowing' strategy*. University of Groningen. <https://doi.org/10.33612/diss.135979053>

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**Sustainable pathways to bio-based amines**  
*via the 'hydrogen borrowing' strategy*

Anastasiia Afanasenko

First edition, October 2020

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



This work was financially supported by the European Research Council, ERC Starting Grant 2015 (CatASus) 638076, and it was a part of the research program Talent Scheme (Vidi) with project number 723.015.005, which is partly financed by the Netherlands Organization for Scientific Research (NWO).

Cover art and illustrations by Anastasiya Arvest

Printed by Ipskamp Drukkers BV, Enschede, The Netherlands



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# **Sustainable pathways to bio-based amines via the 'hydrogen borrowing' strategy**

**PhD thesis**

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

This thesis will be defended in public on

Friday 30 October 2020 at 11.00 hours

by

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