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## **Development of homogeneous catalysts for the selective conversion of levulinic acid to caprolactam**

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**Author:** Raoufmoghaddam, Saeed

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# List of Publications

## PATENT

### Process to Prepare Bio-based $\epsilon$ -Caprolactam

**Raoufmoghaddam, S.**; Drent, E.; Bouwman, E.; Application Number: **EP13162426**;  
Application filing date: April **2013**

## PUBLICATIONS

### Towards Synthesis of Primary Amines: Investigating Rhodium-Catalyzed Homogeneous Reductive Amidation and Hydroamidomethylation with Formamide

**Raoufmoghaddam, S.**; Kortlever, R.; Drent, E.; Bouwman, E.; **2013**, *to be submitted*

### Alternative routes to Caprolactam from Bio-renewable Resources: A Comparison of Hydroamidomethylation and Hydroaminomethylation Reactions

**Raoufmoghaddam S.**; Drent E.; Bouwman E.; **2013**, *to be submitted*

### Electrocatalytic Hydrogenation and Deoxygenation of Fructose

Kwon, Y.; **Raoufmoghaddam, S.**; Koper, M.T.M.; **2013**, *In Preparation*

### From Renewable Feedstock to “Green” Nylon: Catalytic Conversion of $\gamma$ -Valerolactone to $\epsilon$ -Caprolactam

**Raoufmoghaddam, S.**; Rood, M.T.M.; Buijze, F.K.W.; Drent, E.; Bouwman, E.; *Chem. Eur. J.* **2013**, *submitted*

### Chemo- and Regioselective Homogeneous Rhodium-Catalyzed Hydroamidomethylation of Alkenes to N-Alkylamides

**Raoufmoghaddam, S.**; Drent, E.; Bouwman, E.; *ChemSusChem* **2013**, 6, 1759-1773

### Rhodium-Catalyzed Homogeneous Reductive Amidation of Aldehydes

**Raoufmoghaddam, S.**; Drent, E.; Bouwman, E.; *Adv. Synth. Catal.* **2013**, 355, 717-733

### Electrocatalytic Hydrogenation of 5-Hydroxymethylfurfural in the Absence and Presence of Glucose

Kwon, Y.; De Jong, E.; **Raoufmoghaddam, S.**; Koper, M.T.M.; *ChemSusChem* **2013**, 6, 1659-1667

**One-Pot, Three-Component Coupling Reaction: Catalyst-Free Green Synthesis of Novel N-Heteroaryl  $\alpha$ -Naphthylglycines**

Olyaei, A.; Parashkuhi, E. C.; Raoufmoghaddam, S.; Sadeghpour, M.; *Synth. Commun.* **2010**, 40, 3609-3617

**Convenient and Efficient Method for the Synthesis of N-Heteroaryl Aminonaphthols under Solvent-Free Conditions**

Olyaei, A.; Raoufmoghaddam, S.; Sadeghpour, M.; Ebadzadeh, B.; *Ch. J. Chem.* **2010**, 28, 825-832

**Synthesis of Novel Naphth[1,2-f][1,4]oxazepine-3,4-dione Heterocycles**

Ghandi, M.; Olyaei, A.; Raoufmoghaddam, S.; *J. Heterocycl. Chem.* **2009**, 46, 914-918

**One-Pot, Three-Component Uncatalyzed Quantitative Synthesis of New Aminonaphthols (Betti Bases) in Water**

Ghandi, M.; Olyaei, A.; Raoufmoghaddam, S.; *Synth. Commun.* **2008**, 38, 4125-4138

## Curriculum Vitae

The author of this thesis, Saeed Raoufmoghaddam, was born in Lahijan, Iran and raised in Tehran, Iran. After receiving his highschool diploma in 1999, he was admitted (in the Iranian nation-wide entrance exam called Konkour) to commence his bachelor studies in applied chemistry at Guilan University, Rasht, Iran. In 2003-2004, he continued his education at Guilan water treatment company, Rasht, where he was a lab assistant in the water quality control section of the laboratory. In 2004-2005, he moved to the Iranian Petrochemical Commercial Company (IPCC), Tehran, where he had an internship as a vendor for selling chemical compounds to spin-off companies. After achieving 36<sup>th</sup> rank in chemistry nation-wide graduate entrance exam among ~10000 chemistry candidates in 2006, he was admitted to continue his education at the University of Tehran. He performed his MSc thesis research in the group of Prof. Dr. M. Ghandi where he worked on the investigation and synthesis of new aminonaphthol and 1, 4-Oxazepine derivatives. In 2008, he graduated *cum laude* for his master degree in organic chemistry. Then, he was temporarily appointed as a research expert in the oil research laboratory at Behran oil company, Tehran.

In September 2009, the author moved to Leiden University, Leiden, The Netherlands, to pursue his PhD in homogeneous catalysis under supervision of Prof. Dr. E. Bouwman and Prof. Dr. E. Drent. As part of his PhD training, he was involved in assisting several organic and inorganic practical courses and the supervision of MSc students Mark Rood, Ruud Kortlever and Florine Buijze. He attended postgraduate courses including Advanced Metal-Organic Chemistry (2010), Catalysis for sustainability (2010), Catalysis, an integrated approach (2010), Innovative uses of glycerol from the biodiesel process (2011) and Physical methods in inorganic chemistry (2011).

The author also contributed at several national and international conferences, symposia and meetings in order to share his findings to peers with posters (15 times) and lectures (11 times), as listed below.

Saeed was recently admitted to commence his post-doctoral research in the group of Prof. Dr. J. N. H. Reek (HomKat) at University of Amsterdam.

- 2013** CatchBio progress meeting, Nunspeet, NL (Lecture & Poster); Netherlands' Catalysis and Chemistry Conference (NCCC) XIII (Poster); CatchBio user committee meeting, Lunteren, NL (2 Lectures)
- 2012** Netherlands' Catalysis and Chemistry Conference (NCCC) XII (Lecture); ICCOS-2012 International Conference on Catalysis in organic synthesis, Moscow, Russia (Poster); CatchBio progress meeting, Nunspeet, NL (Lecture & Poster); HRSMC symposium, Amsterdam University, Amsterdam, NL (Poster); CatchBio user committee meeting, Lunteren, NL (2 Lectures); LIC symposium, Leiden University, Leiden, NL (Poster)
- 2011** XIX EuCheMS-2011 International Conference on Organometallic Chemistry, Toulouse, France (Poster); CatchBio progress meeting, Nunspeet, NL (Lecture & Poster); Netherlands' Catalysis and Chemistry Conference (NCCC) XI (Poster); HRSMC symposium, Amsterdam University, Amsterdam, NL (Poster); LIC symposium, Leiden University, Leiden, NL (Poster); CatchBio user committee meeting, Lunteren, NL (2 Lectures); CatchBio symposium, Stein-Urmond, NL (Poster)
- 2010** CatchBio progress meeting, Nunspeet, NL (Lecture & Poster); Netherlands' Catalysis and Chemistry Conference (NCCC) X (Poster); CatchBio user committee meeting, Lunteren, NL (Lecture)
- 2009** CatchBio progress meeting, Nunspeet, NL (Lecture & Poster)

# **Nawoord**

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Saeed Roufmoghaddam  
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