



RUHR EXPLORES SOLVATION

**RESOLV**

Understanding and Design of Solvent Controlled Processes

## Guidelines for the Submission of RESOLV GSS Proposals

### PhD Stipend for 1.5 years (Extension for another 1.5 years possible)

**Please note:**

**No financial commitments by RESOLV can be made after 31.12.2018.**

To be submitted to the RESOLV Office ([resolv@rub.de](mailto:resolv@rub.de)). Note that proposals for RESOLV GSS Stipends can be submitted all year round.

(Proposal Text: 2 pages, Arial 12, single line spacing, English, one pdf document)

**NB. Only the PIs and PSs of RESOLV are eligible to submit applications for a research project for GSS PhD Stipends.**

#### Proposal Header:

*(Please fill in the information of your project application)*

Version of Proposal Guideline:	2016-PhD-001
<b>Date:</b>	
<b>Name of Applicant:</b> <i>(Member of RESOLV)</i>	
<b>Title of Proposed Research Project:</b>	
<b>Allocation to Research Area(s) and Cross-Linking Topics:</b> <i>(Please indicate Research Area A, B, and/or C; as well as the name of the Cross-linking Topic Category, if applicable)</i>	
<b>Team Members of the Project:</b> <i>(Please also indicate if other PIs/PSs and/or Members of the IF Solvation Science are involved in your Research Project)</i>	
<b>2 PhD Advisors</b> <i>(Please name two PhD Advisors for the examination committee)</i>	
<b>Comments:</b>	
<b>Reference Number for Submitted Proposal:</b> <i>(to be filled in by RESOLV Office)</i>	

**Proposal Text: Title of Proposal****1. Introduction (Abstract; ca. 0.25 pages):**

*(This part should describe the scientific problem and common objectives.)*

**2. Description of the preliminary work and contribution of each applicant (up to 0.5 pages):**

*(Please include references (according to DFG standards; 1 key publication (PDF) should be attached as a pdf file) demonstrating the importance of the project (e.g. expertise) and its added value for RESOLV (importance for the respective Research Area and Cross-Linking Topics).)*

**3. Description of the work program (up to 1 page):**

*(Include scientific objectives, methods, work package. Describe the integration into RESOLV collaboration network (PIs/PSs, and IF members) and possible links to other existing research networks.)*

**4. IF cooperation partners proposed:**

*(The study program of the Graduate School Solvation Science (GSS) includes research training abroad, e.g. at the IF partner institutions, for up to 3 months. Please specify the envisioned partner institution.)*

**5. Guaranty of financing:**

*(Please include an informal letter that you guarantee to continue the financing and supervision of the respective PhD student in the case that the PhD thesis is not finished before 31.12.2018.)*

## Rules of the GSS PhD Stipend

### 6. Funding period

The funding period starts as soon as you receive a positive decision by the RESOLV board. The project will be funded for 1.5 years with the possibility of an extension for a maximum of another 1.5 years upon positive evaluation of the first funding period. Funding includes one PhD Stipend and a fixed project grant for other costs (refer to Table 1 for further details).

Extension of the PhD stipend is subject to the evaluation of a progress report by the RESOLV Board after circa fourteen months. A template for this progress report can be found in the Solvation Science intranet (<http://www.ruhr-uni-bochum.de/solvation/intranet/>).

Please note that the stipend for a particular **candidate** will be financed for a maximum of 3 years. Also note that the stipend will expire if a suitable candidate is not found within 6 months after the project has been positively evaluated. The PI/PS is then eligible to submit a new proposal to the RESOLV office if desired.

**Table 1: Project Funding**

English	Deutsch
<i>Project Funds</i>	<i>Beantragte Projektmittel</i>
<b>PhD Stipend:</b>	<b>Doktorandenstipendium:</b>
Basic Stipend rate: 1.365 EUR per month	„Stipendiengrundbetrag“: 1.365 EUR monatlich
Rate for other expenses and travel costs: 103 EUR per month	„Mittel für Sach- und Reisekosten in Höhe von 103,- EUR monatlich (Sachkostenzuschuss)“
<b>Travel Cost Reimbursement</b>	<b>Reisekosten</b>
Up to 1.500 EUR per annum for the duration of the stipend	Bis zur 1.500 EUR pro Jahr für die Dauer des Stipendiums
<b>Project Grant “other costs category”</b>	<b>Sachmittelzuschuss zum beantragten Projekt</b>
Fixed project funds of max. 4,200 EUR p.a. for groups working in a theoretical field and 8,400 EUR p.a. for groups working in an experimental field will be granted per project and position occupied. If the position is occupied during the course of the year the project funds amount to 1/12th of 4,200 EUR or 8,400 EUR for each month.	Antragsteller/innen erhalten eine Sachmittelpauschale in Höhe von max. 4,2 K€ p.a. (für theoretisch arbeitende Gruppen) bzw. 8,4 K€ (für experimentell arbeitende Gruppen) für jeden bewilligten Projektantrag und besetzte Stelle/Stipendium. Bei Stellenbesetzung während des laufenden Kalenderjahres wird die Sachmittelpauschale für jeden Monat auf 1/12 von 4.200 € bzw. 8.400 € festgesetzt.
Please note the special regulations for the spending of project funds in 2017 (see RESOLV Intranet -> Sachmittel).	Bitte beachten Sie die besonderen Abrechnungsrichtlinien für Sachmittel im Jahr 2017 (siehe RESOLV Intranet -> Sachmittel).

## 7. Reporting and active contribution to RESOLV

The candidate is expected to complete the GSS Training Schedule and participate in the activities of the GSS. This includes the participation in regular RESOLV/GSS events and, in particular, a mandatory 2-3 research stay abroad, see <http://www.ruhr-uni-bochum.de/gss/index.html.en> for more details. The supervisor of the PhD project is responsible to inform the PhD student about these obligations before the start of the PhD study.

I am also aware that the project leaders are expected to actively participate in the annual RESOLV Workshop and seminars.

## 8. Acknowledgment

The contributions to conferences (oral or poster presentations) must include the RESOLV Logo (can be downloaded on the Solvation Science Intranet: <http://www.ruhr-uni-bochum.de/solvation/intranet/>) and acknowledge the Cluster of Excellence RESOLV (EXC 1069).



In the acknowledgement of papers resulting from scientific work within the framework of RESOLV the following sentence must be used: „This work is supported by the Cluster of Excellence RESOLV (EXC 1069) funded by the Deutsche Forschungsgemeinschaft.“

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Signature of Applicant

## **Glossary:**

### *Titles of Research Areas:*

#### **Research Area A: Understanding and Exploiting Solvation in Chemical Processes**

**A-1:** Van der Waals Complexes and Hydrogen Bonds: Solvating Pre-Reactive Complexes

**A-2:** Non-Conventional Solvents: Ionic Liquids and Supercritical Fluids

**A-3:** Solvation of Ion Pair Intermediates: Steering Chemical Reactions

**A-4:** Solvation of Non-Conventional Molecules: Radicals and Other Open Shell Species

#### **Research Area B: Connecting Solvation Dynamics with Biomolecular Function**

**B-1:** Understanding Hydration Dynamics

~~**B-2:** Solvent and Osmolyte Effects on the Formation and Dynamics of Peptide Secondary and Supersecondary Structures (entfällt)~~

**B-3:** Protein Interactions and Aggregation: Influence of Solvents and Co-Solvents

**B-4:** Enzymatic Reaction Mechanisms and the Influence of Co-Solutes and Co-Solvents

#### **Research Area C: Ion Solvation and Charge Transfer at Interfaces**

**C-1:** Complex Liquid/Solid Interfaces: Coordination, Ad/Desorption, and Defects

**C-2:** Liquid/Soft Matter Interfaces: Function by Structuring the Solvent

**C-3:** Electrodes at Work: From Polarization to Electron Flow to Electrochemistry

~~**C-4:** Ultrahigh Ion Concentrations: Solvent-Deficient Systems and Competition for Solvent (entfällt)~~

**C-5:** Heterogeneously Catalyzed Liquid-Phase Redox Reactions: Mechanisms and Structure-Activity Relationships

### *Titles of Cross-linking Topic Categories:*

1. Solvation Shells and Interfacial Water
2. Ultra-High Concentrations and Crowding
3. Charged Solutes and Electrodes
4. Designer Solvents
5. Desolvation and Resolvation
6. Ion Pairs and Zwitterions