

RESOLV IN A NUTSHELL (2012-2017)

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Since its inception, RESOLV has established an internationally visible research ecosystem for Solvation Science in both European and global terms. Recent advances in spectroscopy, microscopy, and synthetic methodology, as well as in computer simulations herald a new era in the understanding and description of solvation. Solvation Science pursues open, inter- and trans-disciplinary collaborations amongst physicists, chemists, and biologists, like well-established disciplines such as Neuroscience (see 2 Editorials and 1 Themed Issue on Solvation Science: ANIE 2016:55, PCCP 2015:17).

Therefore, Solvation Science has become a key topic at a number of national and international forums. These include: A Heraeus conference “Exploring Solvation Science” in 2013, a symposium of the German Physical Society (DPG) spring meeting in 2014, the main topic of the Bunsen Society 114th annual meeting in 2015, the “8th International Meeting of Biomolecules under Pressure” in 2016, and the 52nd annual Symposium of Theoretical Chemistry in 2016, two sessions on Solvent Design at SAFT 2017, and a symposium at the American Physical Society (APS) in March 2017. Thus, RESOLV has begun to fulfil its initial promise to implement Solvation Science as a *sui generis* scientific discipline, as evidenced so far by more than 500 refereed publications and 85 prizes, of which 7 are ERC awards.

In its first period, RESOLV has successfully established the following new long-lasting structures at RUB: (1) a new 3000 m² research building, the **Center for Solvation Science (ZEMOS)**, (2) **nine new professorships** in Solvation Science, (3) the **Graduate School Solvation Science** as a science-driven



education and training platform with 137 graduate students enrolled since 2013, (4) **Early Career Researchers: Independent ECR group leaders** have been granted full academic privileges (including the supervision of graduate students) and independent funding. RESOLV provides a tailored career development concept. Out of 13 recruited ECR group leaders, 12 subsequently have been promoted to faculty positions. (5) **Gender Equality and Family Affairs:** RESOLV has integrated measures to promote a family friendly environment, increased the diversity of faculty and supported the development of female leadership in science. (6) **The International Faculty Solvation Science:** Researchers at all stages of their careers are embedded in an international consortium for Solvation Science formed by more than 20 renowned groups worldwide. Visiting RESOLV fellows included 7 Humboldt and Bessel Awardees. RESOLV has founded the sister-consortium **CalSolv** at UC Berkeley with which it has developed both exchange and research programs. (7) **Public Outreach:** A RESOLV exhibition and experiments for elementary and high-school pupils have taken Solvation Science into schools. (8) With **TransSOLV** (founded in 2013), RESOLV has established a dedicated center to coordinate and accelerate the effective transfer of its scientific results into industry.