



**Laudatio for the Award Ceremony
of the Prix Schläfli Chemistry 2020
of the Swiss Academy of Sciences (SCNAT)
for Dr Robert Pollice**

The Jury of the Prix Schläfli 2020 of the Swiss Academy of Sciences (SCNAT), consisting of Professors C. Bochet (U. Fribourg), T. Bürgi (U. Geneva), C. Copéret (ETHZ), C. E. Housecroft (U. Basel, president), K. Koch (PH Bern), S. Sturla (ETHZ) and O. Wenger (U. Basel), has decided to award the prize to Dr Robert Pollice for excellence in a research project which culminated in a high impacting publication in the Journal of the American Chemical Society entitled 'Origin of the Immiscibility of Alkanes and Perfluoroalkanes'.

Dr Pollice completed his PhD in 2019 having studied in the research group of Professor Peter Chen at the ETH Zurich.

His doctoral research was within the field of physical organic chemistry and the main focus was to investigate the fundamental interactions in organic molecules which dictate their structures in the gas-phase and also in solution. His results contributed towards an understanding the role played by London dispersion forces.

The paper for which the Prix Schläfli has been awarded was published in the high impacting Journal of the American Chemical Society in 2019 (J. Am. Chem. Soc. 2019, 141, 3489–3506) with Dr Pollice as the principal author. The paper deals with the phase properties of perfluoroalkanes and their miscibility with alkanes. The results of detailed computational modeling carried out by Robert Pollice demonstrated that the shapes of the perfluoroalkane molecules prevent favourable packing with other materials and results in very weak intermolecular interactions. This new model provides a much-needed explanation for trends in the experimental properties of perfluoroalkanes and, as a result, gives a new and exciting starting point which will assist researchers to proceed with the design of new materials which are more environmentally benign than perfluoroalkanes.

We congratulate Robert Pollice on his achievements and wish him well in his future career.

Prof. Catherine E. Housecroft, Platform Chemistry of the Swiss Academy of Sciences

Award ceremony, 3 October 2022 in Zurich, ETHZ