

# Introduction to the themed issue in honour of Jakob Wirz

DOI: 10.1039/b803876g

In June 2007, photochemists from across the world set sail for Basel, a city in Switzerland that is practically synonymous with Chemistry. It is fitting that such heritage served as a backdrop to the celebration that was gathered in honour of the retirement of a very special colleague. Jakob Wirz, *Joggi* to everyone that knows him, profoundly influenced the field of mechanistic photochemistry as surely as Basel itself impacted chemistry. It is with great pride that *Photochem. Photobiol. Sci.* dedicates this themed issue to *Joggi* as a tribute to his long and distinguished career as a scientist, teacher, and devoted supporter of the photochemical community. *Joggi* has worked on a large number of problems in his career, either individually or collaboratively. For some this would have been a morass, but for him these were Alps to be climbed.



Plate 1 Jakob Wirz

Born in 1942, *Joggi* obtained a Diploma in Chemistry from the ETH in Zurich, and then embarked on his PhD degree at the ETH in 1966. During his PhD, he worked with Edgar Heilbronner at a time when photochemistry as we know it today was being written. In these exciting times, *Joggi* began his scientific career studying the photohydration of substituted phenols and naphthols. The Nobel Prize awarded to Norrish and Porter on the following year (1967) underscored the progress being made in relating molecular structure

to the properties of electronically excited states and, in its wake, flash photolysis was recognized as a powerful tool to obtain rate constants for photoinduced processes. *Joggi* embraced the combination of hard spectroscopic data and theoretical calculations to elucidate reaction mechanisms. With his PhD secured, and thanks to a Fellowship from the Royal Society, he set off in 1971 for the Royal Institution to work with Sir George Porter and Sir Derek Barton.



Plate 2 A young *Joggi* hones his glassblowing skills to make quartz accessories (Courtesy W. Rettig)

When *Joggi* returned to Switzerland in 1972, it was as Research Director at the University of Basel, where he turned his attention to the generation and fate of conjugated biradicals. Numerous of these spectroscopically intriguing systems eventually yielded to *Joggi's* tenacity and multi-pronged approach combining low-temperature matrix isolation, flash photolysis, and theoretical calculations. A true experimentalist, *Joggi* always had a critical eye for evaluating data, something that would eventually forge him his current reputation and win the respect of his peers. An excerpt from an early communication by the young Jakob Wirz illustrates this nicely. Upon assigning the T–T absorption of the 1,4-perinaphthadiyl biradical using PPP SCF-CI calculations (M. Gisin *et al.*, *J. Am. Chem. Soc.*, 1979, **101**, 2216), he thus remarked the good fit obtained between the theoretical and experimental

results: “*The (gratifying) numerical agreement of the triplet calculation with the first observed weak and strong transitions should not be overvalued and may well be somewhat fortuitous.*” His passion for biradicals carried him on a long quest that would eventually lead him to that elusive, conjugated hydrocarbon that possessed a triplet ground state (D. R. McMasters *et al.*, *J. Am. Chem. Soc.*, 1997, **119**, 8568). Those that witnessed this feat know also of the considerable synthetic effort and resolve that went into preparing the precursors for this journey.

*Joggi* obtained his Habilitation in 1977 and went on to become full professor at the Physical Chemistry Institute at the University of Basel in 1985. A fruitful collaboration with Jerry Kresge at Toronto University started when *Joggi* first showed, using acetophenone in aqueous media, that flash photolysis could directly yield thermodynamic data of keto-enol equilibria in solution (P. Haspra *et al.*, *Angew. Chem., Int. Ed. Eng.*, 1979, **18**, 617). This eventually resulted in a wealth of information (ketonization/enolization rate constants and equilibria, acidities) being collected for many systems, including kinetically unstable enols, ynols, and the keto forms of phenols.

In more recent times, *Joggi* turned his attention to studying photoremovable protecting groups. Beginning with classical *ortho*-nitrobenzyl ethers, *Joggi's* careful and detailed examination of the mechanism of photorelease was based, as usual, on a formidable battery of experimental and theoretical results. These were shoehorned into a landmark fifteen-page article in which he showed that the decay of the aci-nitro intermediate is not necessarily rate-determining for the release of the protected species and, *en passant*, cast very serious doubts on the interpretation of some biological events determined using caged-ATP (Y. V. Il'ichev *et al.*, *J. Am. Chem. Soc.*, 2004, **126**, 4581). In collaboration with the groups of Rich Givens and Petr Klán, *Joggi* also developed new

---

photolabile protecting groups based on benzoin and *o*-alkylacetophenones.

It was already remarked in the opening paragraph that throughout his career, Joggi provided support for the photochemical community. This took numerous forms, including chairing the European Photochemical Association (2002–2006), serving as a titular member of the Photochemistry Commission of the IUPAC (1989–2002) and on the board of trustees of the International Stiftung Photochemie (1984–2004). Joggi also served on the editorial board of *J. Photochem. Photobiol.* (1982–2001) and as Deputy Editor-in-Chief (2002–2006, then Associate Editor) for *Photochem. Photobiol. Sci.* Another important contribution took the form of

an IUPAC report on methods for the analysis of transient absorbance data that he co-authored with Roland Bonneau and Andreas Zuberbühler (R. Bonneau *et al.*, *Pure Appl. Chem.*, 1997, **69**, 979). Those that have toiled on such tasks know the perseverance and perspiration that takes them to completion. Joggi's distinguished career was recognized many times over, including by the prestigious Werner Prize of the Swiss Chemical Society (1982) and as lecturer for the Theodor-Förster Memorial Lecture of the GDCh (2003).

Many traits, all different, come to the minds of his co-workers and collaborators: Joggi's fast driving through the narrow streets of Basel, how his wit and humor always cast a strange light on hitherto

unchallenged ideas and, of course, his passion for the yearly Basler Fasnacht.† Everyone who has witnessed this event can attest to the solemnity of the moment, as the lights go out at the 4 AM Morgestraich and an eerie procession marches off to the tunes of drums and fifes, kicking-off a three-day celebration of carnival. When they are marching among the fifers of Alti Richtig, under a typical mask with a hooked nose, you will be hard-pressed to identify Joggi with his wife Christine walking from *Beiz*‡ to *Beiz* listening to *Bänkelsongs*§ in typical Basler dialect.

**Dario Bassani and Dick Pagni**

---

† Even today, the countdown to the next Fasnacht is underway on Joggi's web-site!

‡ Pub.

§ Satiric verses.