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Tribute To Professor Toshio Masuda



We celebrate the work of Professor Toshio Masuda – Masuda Sensei – on the occasion of his retirement from Kyoto University. His association with Kyoto University started in 1963 when he enrolled as a student there and finished as Full Professor of Polymer Chemistry in the Graduate School of Engineering on March 31, 2008. During this 45-year span he has excelled as a scientist, as a teacher, and as a person devoted to helping the lives of others. It is my privilege to comment on all three areas.

A prolific writer, perhaps his best-known “breakout” scientific research was published in the *Journal of the American Chemical Society* in 1983, where he reported on the extremely high gas permeability of poly[1-(trimethylsilyl)-1-propyne], a remarkable membrane polymer with permeabilities which still today represent the highest such values. This work, along with his other research interests, led him into two fields of polymer science, transition metal catalysis in polymerization and performance oriented polymer synthesis to form better membrane materials.

Since then he has published continuously in both subjects defining better catalyst structures for the polymerization of acetylene derivative monomers (to substituted polyacetylenes), thereby creating well characterized macromolecules of considerable interest to the field. He and his colleagues have examined not only membrane performance but also ways to achieve higher degrees of order within such materials, including the induction of well-defined tertiary polymer structures.

I remember Masuda Sensei’s 1983 paper. All of us in the membrane field do. Eventually he and I began to interact in another field

of chemistry, olefin metathesis. This chemistry brought both of us into challenging mechanistic considerations, where he often defined such complicated science with precision and correctness. His dedication to excellence and his attention to detail explain why he was chosen as an Editor for *Polymer* in 1999.

As a teacher, Masuda Sensei is exceptional. I have witnessed his teaching directly. His work at Kyoto University, both at the undergraduate and graduate level, has influenced thousands of students. He is well organized and expects much from them, especially his graduate students. During his time at Kyoto University he assisted 110 graduate students towards their masters and Ph.D. degrees. He and many others there have tirelessly sought the resources necessary to keep the teaching and research facilities modern at Kyoto University, eventually moving to the new Katsura Campus there in 2003. It is an excellent facility, offering the best environment for the continuation of polymer research at Kyoto, which has a rich history in macromolecules extending back almost 100 years.

His teaching will continue. He has accepted a professorship at Fukui University of Technology, a medium-sized private university where he will carry on his work in the classroom. These students will enjoy with a fine lecturer who has a complete understanding of what is important for them. You can be certain that he will pay close attention to detail, and that nothing will be missing in his presentations. Fukui University of Technology is lucky to have him join their staff which leads me to write about Professor Masuda as a person devoted to helping the lives of others. All of us in academics have an obligation to do this, some with greater commitment than others. Professor Masuda’s commitment has been 100% strong, always working to the advantage of students who rely on his leadership. To put it in perspective, Masuda Sensei’s day is not complete until he is sure he has taken care of his obligations to others, including his family.

This interest in helping people became obvious to me as our close interactions developed over the years. He cares for people who count on him, especially his students. He constantly provides encouragement, not only in being available regularly to them but also in setting high standards for their research. In addition he includes many social occasions for his research group, the intent being to build a close working relationship amongst all of them. At the same time, he tries to include foreigners as part of the group as a whole.

I experienced his care for foreigners first-hand. My wife, Margaret, and I enjoyed a sabbatical stay at Kyoto University in the Masuda Research Group in 2003 with a further visit by both of us in 2004. He and others paid special attention to the details required for foreigners like us in Japan, well beyond what would have been normally expected. Everything was taken care of.



The Masuda Research Group in June, 2004



Ken & Margaret Wagener on a May, 2004 excursion in Japan with Toshio & Keiko Masuda

Nothing was missing. Still today we talk about how the Japanese look after their visitors so well.

What also is clear is how much he likes to tell about the culture of Japan and the country's long history. We spent many times together examining these topics, witnessing the art and artistry that is found in Kyoto City especially. Any visitor to Japan is certainly much better off by having Toshio Masuda and his family as cultural guides.

Professor Masuda's career has been a model example of the benefits of international collaborations and hospitality. Congratulations, Toshio san. We look forward to hearing about your work at Fukui University of Technology. We celebrate your retirement from Kyoto University and wish you the best as you continue your career.

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