



Department of Chemistry
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Biocomplexity Faculty Search Committee
c/o Prof. Rob de Ruyter van Steveninck
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Dear Colleagues,

I am pleased to write a letter of recommendation for Dr. Jörg Rösgen. Let me say from the out set that he is an excellent scholar and will make a fine faculty member. It was clear from the letter Prof Hinz wrote for Jörg when he applied for a postdoctoral position that we had a rare talent about to join the lab. Jörg had a position here as a Keck Fellow, which requires two mentors. His project was such that one mentor, Prof. Wayne Bolen, needed to be a biophysical chemist and the other (me) a computational theorist. This prestigious fellowship is for people at the interface between the biological and physical sciences. As a result, few are able to withstand the rigors of answering to two laboratories. Jörg has had no problem. He has in fact excelled.

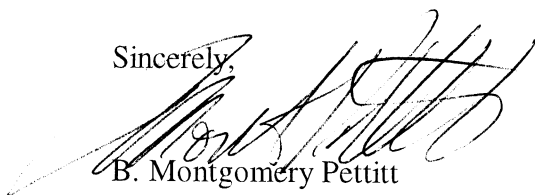
Dr. Roesgen took a tough problem: the physical chemistry of cellular crowding. The physical basis of nearly all of what has been deduced about biological events occurring in cells has come from biochemical measurements conducted in dilute aqueous solution. In the infinite dilution limit, the thermodynamic activity of each participant in biological events can be equated with their respective concentrations, and the system is considered to exhibit thermodynamic ideality. The practical consequence of thermodynamically ideal (highly) dilute solutions is that one only needs to measure or know the concentrations of

the participants in biological events of interest, in order to apply thermodynamics to the study of biological systems. In reality, however, biological reactions occur in the concentrated, crowded (thermodynamically nonideal) environment of the cell. Though it is known to be incorrect and dangerous to do so, it is common practice to assume that molecular behavior and events occurring in dilute solution represent what takes place in the cell. Jörg took on this problem of understanding rigorous solution physical chemistry in the cellular context with great vigor and even insight. I am impressed by his depth and tenacity. His results are starting to have impact as well. He has produced two papers to date (one in print, one in press the other ready for submission) with more on the way.

Jörg has shown remarkable ability in both the wet lab and the theory lab part of his project. He has forged quite a link between my lab and that of Prof Bolen in the accomplishment of his project. He is also a very conscientious person who will certainly do well in an academic setting. He is a very hard worker (spends long hours in the lab) and writes (and speaks) very well. He is a good sport and interacts in a very low key way personally.

I can certainly recommend Jörg to you as a future colleague. He is ready and will get a faculty position somewhere soon. I feel he is only beginning his best work and has great potential for the future. Please do not hesitate to contact me if I can provide any further information.

Sincerely,



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