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Institut für Physikalische Chemie, Corrensstr. 30, 48149 Münster

Institut für Physikalische Chemie
Prof. Dr. Hans-Jürgen Hinz

D-48149 Münster, den 16. Dezember 2004
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Biocomplexity Faculty Search Committee
c/o Prof. Rob de Ruyter van Stevernick
Department of Physics
Indiana University
Swain Hall West 117
Bloomington, IN 47405-7105
USA

Dear Prof.Rob de Ruyter van Stevernick,

included you find a letter of recommendation for Dr. Joerg Roesgen. Dr. Roesgen has informed me about his application to your department and I am pleased to recommend him highly for the position. He is an exceptionally good young scientist, whose invitation for an interview you certainly will not regret.

In case you need further information please do not hesitate to contact me.

With best regards

H.-J. Hinz

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Letter of support

It is a rare occasion that one has a chance to support a young scientist full-heartedly, without any reservations and with the strong conviction that every word of praise is merited and will be justified by his significant scientific contributions in the future.

Joerg Roesgen worked with me during both his "Diplomarbeit" and his PhD thesis in the Institute of Physical Chemistry of the Westfaelische Wilhelms-Universität (WWU) Muenster , Germany, and he passed the examinations with the highest possible distinction of "**summa cum laude**", a grade that is awarded to only 5% of all finishing chemists in the department. His exceptional qualification and broadness of talent is underlined by the outstanding choice of subjects he made in his university education. He was able to synchronously study biology and mathematics and take courses in theoretical physics and chemistry, and still found time for playing rather professionally the violoncello in a university orchestra.
In his **PhD thesis** entitled: **"Statistical thermodynamic analysis and quantification of protein states"** he combined an elegant, innovative, in-depth statistical mechanical analysis of protein behaviour with precise thermodynamic (DSC, DSD, PMC, ITC), kinetic and spectroscopic measurements (CD, fluorescence, dynamic light scattering). The generality of his approach permitted him to treat Ca-ion binding proteins such as annexins, self-aggregating systems such as S100 A8 and A9 proteins, which are involved in inflammatory processes of cells, and protein folding reactions of four helix bundle proteins such as ROP and various mutants. So far 9 papers based on his PhD thesis work have been published in peer reviewed journals. Among them are ground-breaking studies on the usage of phase diagrams of proteins in the analysis of reaction mechanisms and sophisticated applications of the various statistical ensembles for the explanation of apparent heat capacity anomalies observed in protein folding.

His enormous scientific potential has been documented again convincingly in the productivity he shows only one year after turning to a completely new field in which he wants to excel in the future. His new activities center around the ambitious goal of providing the theoretical and experimental basis for understanding the physical chemistry of the highly non-ideal cell environment. Although he profits enormously from the stimulating interactions with such eminent scientists as W. Bolen and M. Pettitt, I am convinced, from knowing him particularly well, that the fundamental ideas of the theoretical approaches are his, so are the meticulous measurements and the methodological improvements of the techniques required to provide the adequate data. One important paper was published recently in **The Journal of Physical Chemistry** B 2004, 108(6) p. 2048-2055 , a second one in **Biochemistry** 2004, 43, 14472-14484 and two more are in preparation.
This is definitely only the beginning of a boost of scientific productivity, and any department that provides him with appropriate working conditions will profit from his scientific brilliance.

His research project aiming at coping with the commonly unduly neglected problem of non-ideality in the cell is highly relevant to understanding biological regulation as well as protein folding, conformational stability and genome expression. The solution of the problem requires a high degree of interdisciplinary thinking, outstanding experimental skills and highly developed mathematical abilities. Dr. J. Roesgen combines these talents in a unique manner.

However, exceptional research qualifications are not the only criterion for hiring somebody for a professor`s position although a very significant one. The choice will also be determined by the ability of the applicant to be communicative, to easily integrate into teamwork, to have group leading qualities and to be a good teacher. In my conviction Joerg Roesgen meets also these criteria to an exceptional degree. And above all he is a very delightful person.

Therefore I highly recommend him for the position. I am fully convinced that he meets the standards your university expects and that his presence will contribute to the promotion of the department's excellent reputation.

Hans-Jürgen Hinz