HySA Systems Competence Centre

South African Institute for Advanced Materials Chemistry (SAIAMC),

University of the Western Cape

Private Bag X17, Bellville 7535, South Africa

Tel: +27 (0)21 959 9319, Fax: +27 (0)21 959 9312

Cell: +27 (0)714840323 – E: bgpollet@hysasystems.org

W: www.hysasystems.org - www.brunogpollet.com



Chairman of the Nobel Committee for Chemistry at The Royal Swedish Academy of Sciences

Box 50005

SE-104 05 Stockholm, Sweden

Phone: +46 8 673 95 00 Fax: +46 8 15 56 70

E-mails: <u>info@kva.se</u>, <u>reception@kva.se</u> Sara.Linse@biochemistry.lu.se

<u>Subject:</u> Nominating

Dmitry V.Schur, Svetlana Yu.Zaginaichenko, T. Nejat Veziroglu for the Nobel Prize of 2016 in Chemistry

I am delighted to write to you in support of nomination of the following scientists:

Dmitry V. Schur, Svetlana Yu. Zaginaichenko and T. Nejat Veziroglu for the Nobel Prize in Chemistry because of their findings on fullerene molecule that are presented in the recent published paper:

"The hydrogenation process as a method of investigation of fullerene C₆₀ molecule", Int. Journal of Hydrogen Energy, 2015, Vol.40, № 6, P.2742-2762

In the published paper the existence of fullerene molecules in the form of three isomers α , β , and γ in the solid (fullerite) has been confirmed. It has been experimentally shown that the processes occurring during crystallization, depolymerization and phase transitions in the solid (fullerite) under changes of temperature and pressure is a consequence of the tautomerism in the fullerene molecule.

From these experimental results scientists have concluded that the concept of the existence of three (3) stable isomers and their tautomerism allows the explanation of the physical and chemical effects of the fullerene molecule behavior in three (3) aggregative states. The extremality of solubility, polymerization, depolymerization, color of solutions, special features of the salting out at different temperatures, molecular and phase transitions *et al.* can be attributed to such effects.







HySA Systems Competence Centre South African Institute for Advanced Materials Chemistry (SAIAMC), University of the Western Cape

Private Bag X17, Bellville 7535, South Africa

Tel: +27 (0)21 959 9319, Fax: +27 (0)21 959 9312

Cell: +27 (0)714840323 – E: bgpollet@hysasystems.org

W: www.hysasystems.org - www.brunogpollet.com



Thus, the work of these scientists-pioneers has laid the fundamentals of theory of the formation and transformation of the spherical molecules.

The scientists have presented the clear model. I think it is an important research paper, which would be of interest to many scientists - chemists and physicists around the world.

With very kind regards,

Runo Koller

Professor Bruno G. Pollet MRSSAf FRSC AFIChemE

Extraordinary Professor of Energy Materials and Systems at the University of the Western Cape (South Africa) Board of Directors & RSA Vice-President of the International Association of Hydrogen Energy (IAHE) Co-founder and Board of Directors of the South African Hydrogen Association (SAHA) Visiting Professor at the Yamanashi University Fuel Cell Nanomaterials Centre (Japan) Visiting Professor at the University of Ulster Hydrogen Safety Engineering and Research Centre (UK)

Mobile: +44(0)7814952112

Skype: bgpollet12

Email: bgpollet@hysasystems.org

www.brunogpollet.com



