

Dear Rich Norman and Colleagues,

I have worked on creation of quantum computer based on organic and bio-organic molecules during 2002-2003 years (half year) in USA Los Alamos National Laboratory (LANL) – host professor Gennady Berman.

I have wrote around 300 hundreds pages report about my contribution in this project before my leaving LANL but only very beginning of this my report was allowed to publish, see [1, 4]. I have published some materials from my LANL quantum computing report (see [2, 3, 5]) after returning to Lithuania.

Many materials and ideas of LANL quantum computing project report are still unpublished because I was very interesting the new European Commission financed project: Programable Artificial Cell Evolution (PACE), see <http://www.istpace.org/index.html>

I have continued to combine the LANL quantum computing project with the PACE project (see, for example [6-9]).

I hope that in the case of financing of our joint projects, I will able to use my knowledge in the field of creation of quantum computer based on bio-organic molecules.

Most important associated publications

1. A. Tamulis, V. I. Tsifrinovich, S. Tretiak, G. P. Berman, D. L. Allara, “Neutral Radical Molecules Ordered in Self-Assembled Monolayer Systems for Quantum Information Processing”, arXiv.org e-Print archive, Quantum Physics, <http://arxiv.org/list/quant-ph/0307?100>, quant-ph/0307136 [abs, pdf], July, 2003.
2. J. Tamuliene, A. Tamulis, J. Kulys, “Electronic Structure of Dodecyl Syringate Radical Suitable for ESR Molecular Quantum Computers”, *Nonlinear Analysis: Modelling and Control*, Vol. 9, No. 2, 2004, p. 185-196.
3. Zilvinas Rinkevicius, Arvydas Tamulis, Jelena Tamuliene. “Beta-Diketo Structure for Quantum Information Processing”, *Lithuanian Journal of Physics*, vol. 46, p.p. 413-416 (2006).
4. A. Tamulis, V. I. Tsifrinovich, S. Tretiak, G. P. Berman, D. L. Allara, ”Neutral Radical Molecules Ordered in Self-Assembled Monolayer Systems for Quantum Information Processing”, *Chemical Physics Letters*, vol. 436, p.p. 144 - 149 (2007).
5. J. Tamuliene, Z. Rinkevicius , and A. Tamulis, “Investigations of Neutral Radical Molecules Suitable for Quantum Information Processing”, *Lithuanian Journal of Physics*, Vol. 47 , No. 2, pp. 137–142 (2007).
6. Arvydas Tamulis and Mantas Grigalavicius; Molecular Spintronics Control of Photosynthesis in Artificial Cell; *Journal of Computational and Theoretical Nanoscience*, 10: No. 4, 989-995, 2013.
7. Arvydas Tamulis, Mantas Grigalavicius; Quantum Entanglement in Photoactive Prebiotic Systems; *Systems and Synthetic Biology*, 8, 117-140, 2014.
8. Arvydas Tamulis, Mantas Grigalavicius, Sarunas Krisciukaitis; Quantum Entanglement in a System Composed of Two Prebiotic Kernels with Molecular Spintronics Logic Devices for Control of Photosynthesis; *Journal of Computational and Theoretical Nanoscience*, 11, 1597-1608, 2014.
9. Tamulis A, Grigalavicius M, Serbenta J, Plausinaitis K; Quantum Entangled Single BioOrganic

Supramolecules as Light Absorbing and Light Emitting Logical Devices; *Journal of Computational and Theoretical Nanoscience*, **12**, 2015.

With best regards,
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Independent expert of European Commission