

Annual Report 2014

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Classification: *Theory - Condensed matter and statistical physics.*

During the year 2014 the scientific activity was mainly devoted to the modeling of the electrical properties of sensing proteins [1-3]. In particular, we have announced a new discipline [3], the so called proteotronics. The main aim of proteotronics is to propose and achieve innovative electronic devices, based on the selective action of specific proteins. Reference [3] gives a sketch of the fields of applications of proteotronics, by using as significant example the detection of a specific odorant molecule carried out by an olfactory receptor.

REFERENCES

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2. E. Alfinito, J. Pousset, L. Reggiani, Investigations on the current-voltage response in protein light receptors, Journal of Physics: Conference Series 490 (2014) 012134 (1-5) doi:10.1088/1742-6596/490/1/012134
3. E. Alfinito, L. Reggiani, J Pousset, Proteotronics: electronic devices based on proteins, Proceedings of the II National Meeting on Sensors, Rome-Italy February 19-22 (2014) <http://arxiv.org/abs/1405.3840>