

## **Comparison of single channel potassium current in biological and synthetic systems - dependence on voltage**

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The influence of an external field on an ion current pattern in biological and synthetic systems was investigated. The patch clamp recordings of potassium current through a big conductance locust potassium channel (BK-channel) and a track-etched polyethylene terephthalate membrane were examined by the power spectrum, fractal analysis and relative dispersion analysis. A similar dependence of potassium current behaviour on the external voltage in both systems was found. The generalized dimension formalism is redefined to make it applicable to the analysis of time series.