UNIVERSITY OF
Southampton
School of Chemistry

February 8, 2019

Prof. Lucio Frydman
Editor,
Journal of Magnetic Resonance

Manuscript on a Modular Microfluidic NMR Probe System

Dear Lucio,

Please find enclosed our manuscript titled “Modular transmission line probes for microfluidic nuclear magnetic resonance spectroscopy and imaging”, which we submit for publication in the Journal of Magnetic Resonance.

We report a novel modular dual channel NMR probe assembly which enables a wide range microfluidic NMR experiments, including proton-detected double resonance methods. We show that its performance in terms of sensitivity, RF homogeneity, and resolution compares favourably with the best microfluidic NMR systems that have been reported to date. At the same time, the probe assembly is designed to keep the manufacturing process as simple as possible. The probe structure is built entirely from easily accessible materials such as Aluminium profiles, and the detector is implemented in standard printed circuit board technology. We hope that this will enable other researchers within the magnetic resonance community who are interested in developing applications of microfluidic NMR spectroscopy to build their own systems.

With best wishes,

Marcel

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