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APPENDIX

These Figure show the electrochemical impedance plot (Nyquist plot) of the SAMs with different alkyl chain lengths after immobilizing antibodies and binding Claudin 4 Recombinant Proteins at different concentrations

1. Mercaptopropionic acid (3MPA)

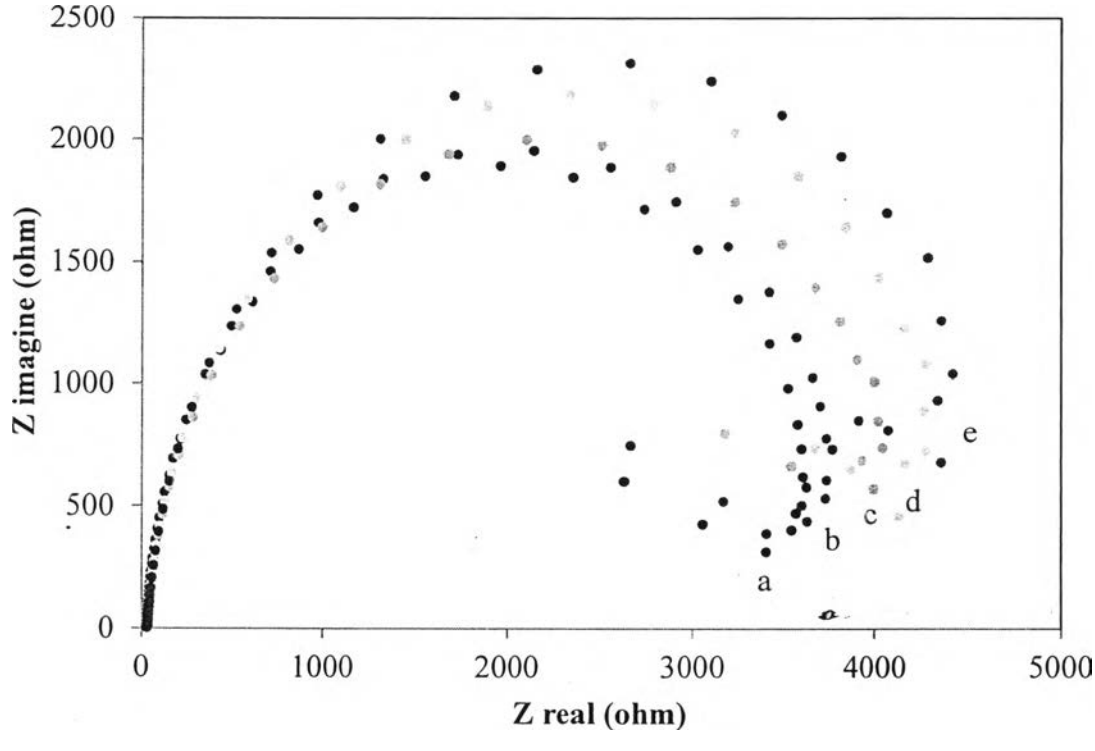

Figure A1 Impedance plot (Nyquist plot) of the sensor with 3MPA thiolate SAM in 0.1 M KCl, 5 mM $K_3Fe(CN)_6$ and 5 mM $K_4Fe(CN)_6 \cdot 3H_2O$ in 0.05 M phosphate buffer pH 7 as the supporting electrolyte for (a) SAM (b) after antibodies immobilization (c) 0.5 µg/ml antigen, (d) 1 µg/ml antigen , (e) 2 µg/ml antigen.

2. Mercaptohexanoic acid (6MOA)

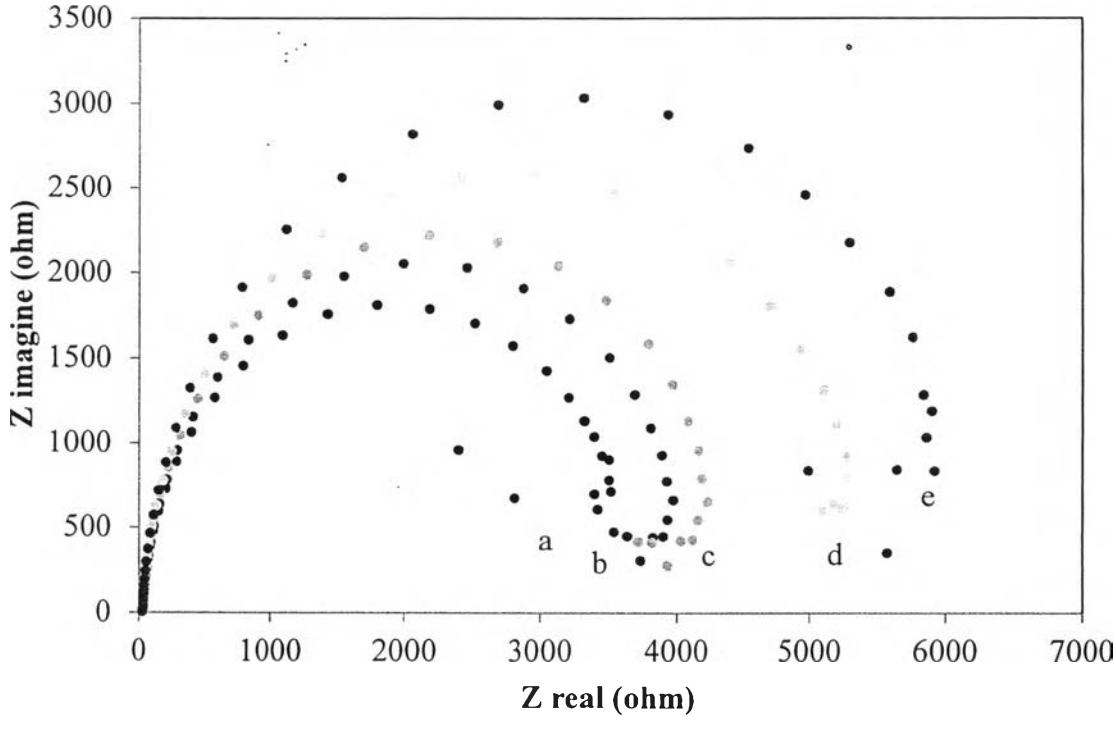

Figure A2 Impedance plot (Nyquist plot) of the sensor with 6 MHA thiolate SAM in 0.1 M KCl, 5 mM $K_3Fe(CN)_6$ and 5 mM $K_4Fe(CN)_6 \cdot 3H_2O$ in 0.05 M phosphate buffer pH 7 as the supporting electrolyte for (a) SAM (b) after antibodies immobilization (c) 0.5 µg/ml antigen, (d) 1 µg/ml antigen , (e) 2 µg/ml antigen.

3. Mercaptooctanoic acid (8MOA)

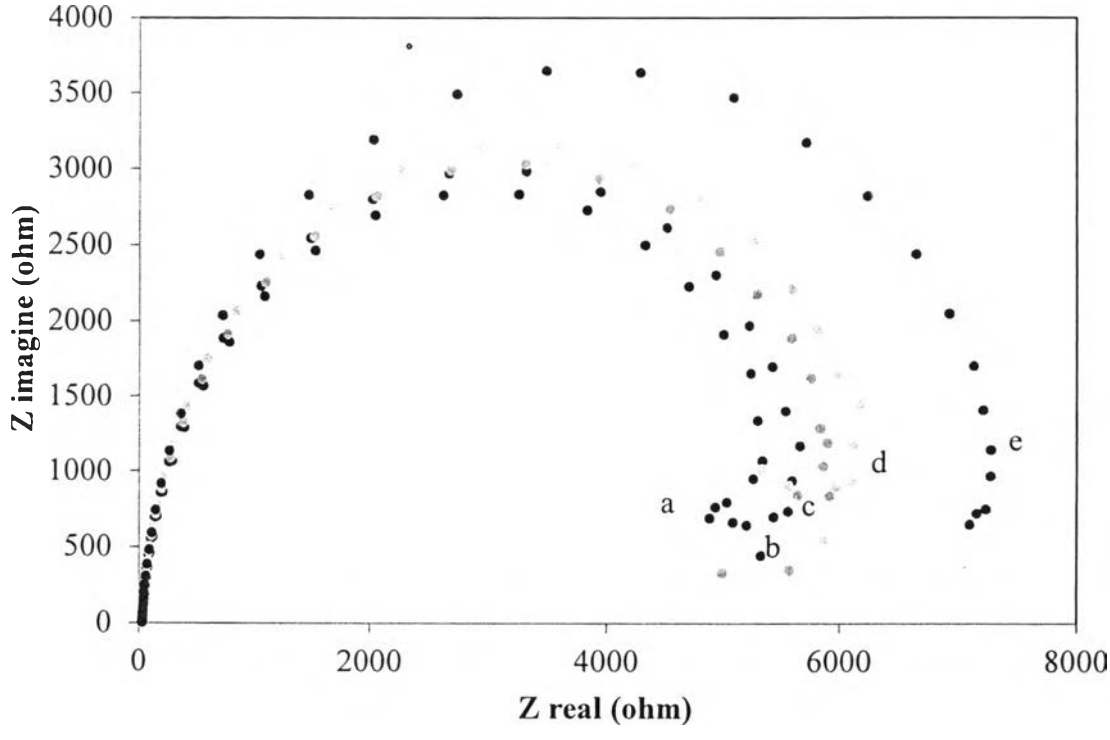

Figure A3 Impedance plot (Nyquist plot) of the sensor with 8 MOA thiolate SAM in 0.1 M KCl, 5 mM K3Fe(CN)6 and 5 mM K4Fe(CN)6·3H2O in 0.05 M phosphate buffer pH 7 as the supporting electrolyte for (a) SAM (b) after antibodies immobilization (c) 0.5 μg/ml antigen, (d) 1 μg/ml antigen , (e) 2 μg/ml antigen.

4. Mercaptoundecanoic acid (11MUA)

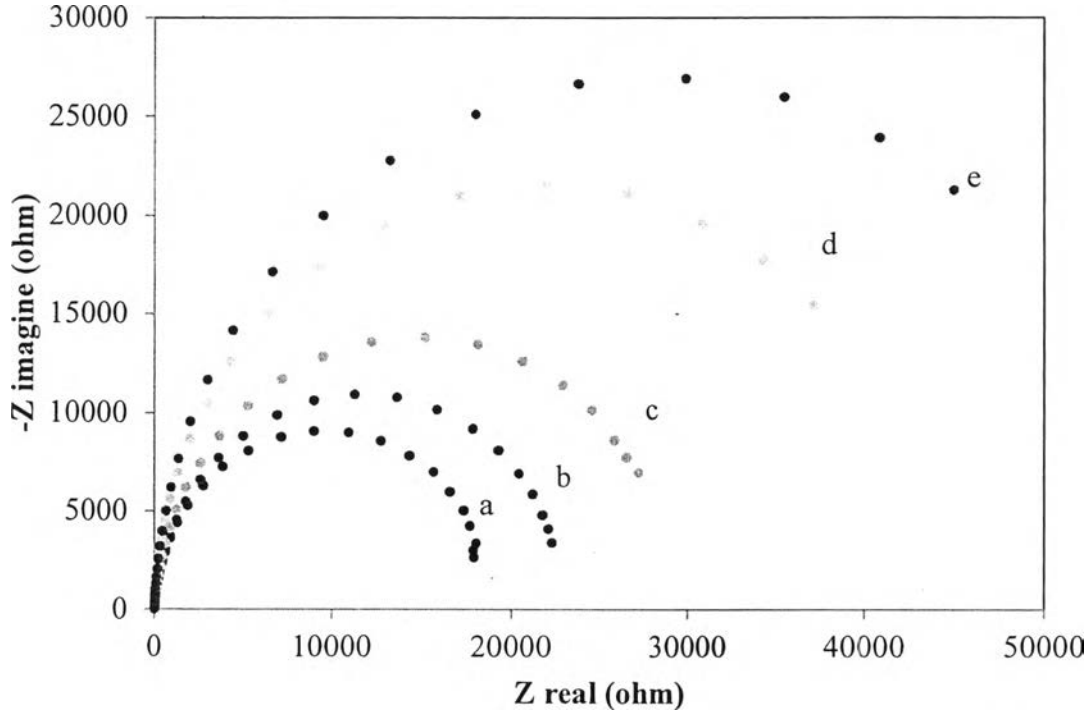

Figure A4 Impedance plot (Nyquist plot) of the sensor with 8 MOA thiolate SAM in 0.1 M KCl, 5 mM K3Fe(CN)6 and 5 mM K4Fe(CN)6·3H2O in 0.05 M phosphate buffer pH 7 as the supporting electrolyte for (a) SAM (b) after antibodies immobilization (c) 0.5 μg/ml antigen, (d) 1 μg/ml antigen , (e) 2 μg/ml antigen.

CURRICULUM VITAE

Name: Mr. Chayut Yaempho

Date of Birth: June 9, 1991

Nationality: Thai

University Education:

2013-2015 Master Degree of Petrochemical Technology, Petroleum and Petrochemical Technology college, Chulalongkorn University, Bangkok, Thailand

2009-2013 Bachelor Degree of Science in Department of Chemical Technology, Faculty of Science, Chulalongkorn University, Bangkok, Thailand

Work Experience:

2013	Position:	Student trainee
	Company name:	Thaioil Public Company Limited

Proceeding:

1. Yaempho, C., Kim, D. S., and Malakul, P. (2015, April 21) Electrochemical Biosensors to Detect Microbes in Petrochemical Processes. Proceedings of the 6th Proceedings of The 6th Research Symposium on Petroleum, Petrochemicals, and Advanced Materials and The 21th PPC Symposium on Petroleum, Petrochemicals, and Polymer, Bangkok, Thailand.