



## Assistant Professor Dr. Kontad Ounnunkad

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### Education

2010 PhD (Chemistry), University of Wollongong, Australia  
2004 MSc (Physical Chemistry), Mahidol University, Thailand  
2001 BSc (2nd class honors in Chemistry), Chiang Mai University, Thailand

### Profession

2015-present Assistant Professor, Chiang Mai University  
2004-2014 Lecturer, Chiang Mai University, Thailand  
2016 Fellow (Researcher Links: Travel Grant, British Council)  
School of Chemistry, University of Manchester, United Kingdom  
2015 Fellow (Endeavour Research Fellowships, Australian Embassy)  
School of Chemistry, Monash University, Clayton, Australia  
2014 Fellow (Fellowships, the Matsumae International Foundation, Japan)  
Niigata University, Japan  
2013 Fellow (Junior Fellowships, France Embassy)  
University of Cergy-Pontoise, Paris, France

### Awards

The highest impact factor publication awarded by Faculty of Science, Chiang Mai University (ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY IF=5.604(2016))

### Current Research Activity

-Electrochemical sensors, immunosensors, electromaterials, electrochemistry, molecular imprinting, electrode fabrication  
-Nanomaterials based on carbons, 2D nanomaterials, conducting polymers, bionanomaterials, biomaterials, and biomedical materials and devices  
-Energy technology; solar cells, supercapacitors, electrocatalysts

### Bibliographic Indicators

Peer-reviewed papers: 30 (2006-2019)  
Citations: 379 – H-index: 9 (ISI, 6 June 2019)  
Web of Science ResearcherID: 0-9185-2018  
ORCID: orcid.org/0000-0001-7965-7715; Scopus Author ID: 54891618900, 14123856900

### Publications

1. Chamhari Pothipor, Natta Wiriyakun, Thitirat Putnin, Aroonsri Ngamaroonchote, Jaroon Jakmune, **Kontad Ounnunkad\***, Rawiwan Laocharoensuk\*, Noppadol Aroonyadet\*, "Highly sensitive biosensors based on graphene-poly (3-aminobenzoic acid) modified electrodes and porous-hollowed-silver-gold nanoparticle labelling for prostate cancer detection" *Sensors and Actuators B: Chemical*, In press, (4 June 2019, Article 126657)
2. Sopit Phetsang, Jaroon Jakmune, Pitchaya Mungkornasawakul\*, Rawiwan Laocharoensuk\*, **Kontad Ounnunkad\***, "Sensitive amperometric biosensors for detection of glucose and cholesterol using a platinum/reduced graphene oxide/poly(3-aminobenzoic acid) film-modified screen-printed carbon electrode", *Bioelectrochemistry* **127** (2019) 125-135.
3. Thitirat Putnin, Aroonsri Ngamaroonchote, Natta Wiriyakun, **Kontad Ounnunkad\***, Rawiwan Laocharoensuk\*, "Dually functional polyethylenimine-coated gold nanoparticles: a versatile material for electrode modification and highly sensitive simultaneous determination of four tumor markers", *Microchimica Acta* **186**[5] (2019) 305.
4. Ploypailin Petsawi, Patrawadee Yaiwong, Rawiwan Laocharoensuk, **Kontad Ounnunkad\***, "Determination of copper(II) and cadmium(II) in rice samples by anodic stripping square wave voltammetry using reduced graphene oxide/polypyrrole composite modified screen-printed carbon electrode", *Chiang Mai Journal of Science* **46**[2] (2019) 322-336
5. K. Mahesh, S. Karpagam\*, Thitirat Putnin, Huong Le, Thanh-Tuan Bui, **Kontad Ounnunkad**, Fabrice Goubard, "Role of cyano substituents on thiophene vinylene benzothiadiazole conjugated polymers and application as hole transporting materials in perovskite solar cells", *Journal of Photochemistry and Photobiology A-Chemistry* **371** (2019) 238-247.
6. Martin Robinson\*, **Kontad Ounnunkad**, Jie Zhang, David Gavaghan\*, Alan Bond\*, Integration of Heuristic and automated parametrization of three unresolved two-electron surface-confined polyoxometalate reduction processes by AC voltammetry", *ChemElectroChem* **5**[23] (2018) 3771-3785.

7. Suwaphid Themsirimongkon, **Kontad Ounnunkad**, Surin Saipanya\*, "Electrocatalytic enhancement of platinum and palladium metal on polydopamine reduced graphene oxide support for alcohol oxidation", *Journal of Colloid and Interface Science* **530** (2018) 98-112.
8. Napapha Promsawan, Supawadee Uppamahai, Suwaphid Themsirimongkon, Burapat Inceesungvorn, Paralee Waenkaew, **Kontad Ounnunkad**, Surin Saipanya\*, "Catalytic investigation of PtPd and titanium oxide-loaded reduced graphene oxide for enhanced formic acid electrooxidation", *Journal of Nanoparticle Research* **20**[9] (2018) 258.
9. Thitirat Putnin, Huong Le, Thanh-Tuan Bui\*, Jaron Jakmune, **Kontad Ounnunkad**, Sebastien Peralta, Pierre-Henri Aubert, Fabrice Goubard, Aurica Farcas\*, "Poly(3,4-ethylenedioxythiophene/permethylated beta-cyclodextrin) polypseudorotaxane and polyrotaxane: Synthesis, characterization and application as hole transporting materials in perovskite solar cells", *European Polymer Journal* **105** (2018) 250-256.
10. Doldet Tantraviwat, Supanan Anuchai, **Kontad Ounnunkad**, Surin Saipanya, Noppadol Aroonyadet, Gobwute Rujijanagul, Burapat Inceesungvorn\*, "Structural properties of tungsten-doped cobalt molybdate and its application in electrochemical oxygen evolution reaction", *Journal of Materials Science-Materials in Electronics* **29**[15] (2018) 13103-13111.
11. Chammari Pothipor, Chutiparn Lertvachirapaiboon, Kazunari Shinbo, Keizo Kato, Futao Kaneko, **Kontad Ounnunkad\***, Akira Baba\*, "Development of graphene oxide/poly(3,4-ethylenedioxythiophene)/poly(styrene sulfonate) thin film-based electrochemical surface plasmon resonance immunosensor for detection of human immunoglobulin G", *Japanese Journal of Applied Physics* **57**[2] (2018) 02CA07.
12. Thitirat Putnin, Watthanachai Jumpathong, Rawiwan Laocharoensuk, Jaron Jakmune, **Kontad Ounnunkad\***, "A sensitive electrochemical immunosensor based on poly(2-aminobenzylamine) film modified screen-printed carbon electrode for label-free detection of human immunoglobulin G", *Artificial Cells Nanomedicine and Biotechnology* **46**[5] (2018) 1042-1051.
13. Paralee Waenkaew, Suwaphid Themsirimongkon, **Kontad Ounnunkad**, Napapha Promsawan, Aunanong Pinithchaisakula, Surin Saipanya\*, "Successive electrodeposition of polydopamine and PtPd metal on a graphene oxide support for use as anode fuel cell catalysts", *Composite Interfaces* **25**[4] (2018) 317-333.
14. Chidkamon Thunkhamrak, Preeyaporn Reanpang, **Kontad Ounnunkad**, Jaron Jakmune\*, "Sequential injection system with amperometric immunosensor for sensitive determination of human immunoglobulin G", *Talanta* **171** (2017) 53-60
15. **Kontad Ounnunkad**, Hollie V Patten, Matej Velicky, Anna Farquhar, Paula A Brooksby, Alison J. Downard, Robert Dryfe\*, "Electrowetting on conductors: Anatomy of the Phenomenon", *Faraday Discussions* **199** (2017) 49-61
16. Aunanong Pinithchaisakula, Suwaphid Themsirimongkon, Napapha Promsawan, Paralee Weankeaw, **Kontad Ounnunkad**, Surin Saipanya\*, "An Investigation of a Polydopamine-Graphene Oxide Composite as a Support for an Anode Fuel Cell Catalyst", *Electrocatalysis* **8**[1] (2017) 36-45.
17. A. Pinithchaisakula, **K. Ounnunkad**, S. Themsirimongkon, N. Promsawan, P. Waenkaew, S. Saipanya\*, "Efficiency of bimetallic PtPd on polydopamine modified on various carbon supports for alcohol oxidations", *Chemical Physics* **483-484** (2017) 56-67.
18. Poachanee Norfun, Nuttee Suree, Nawe Kungwan, Winita Punyodom, Jaron Jakmune, **Kontad Ounnunkad\***, "Electrochemical Detection of Human Interleukin-15 Using a Graphene Oxide-modified Screen-printed Carbon Electrode", *Analytical Letters*, 2016 doi: 10.1080/00032719.2016.1216123
19. Poachanee, Norfun, Watthanachai Jumpathong, Nawe Kungwan, Jaron Jakmune, **Kontad Ounnunkad\***, Electroanalytical Application of Screen-printed Carbon Electrode Modified with Conductive Graphene Oxide-Poly(acrylic acid) Film for Label-free Detection of Human Immunoglobulin G, *Chemistry Letters*, **45**[12] (2016) 1444-1446.
20. Watthanachai Jumpathong, Jaron Jakmune, **Kontad Ounnunkad\***, "A sensitive and disposable graphene oxide electrochemical immunosensor for label-free detection of human immunoglobulin G", *Analytical Sciences* **32**[3] (2016) 323-328.
21. Chamari Pothipor, Nawe Kungwan, Jaron Jakmune, **Kontad Ounnunkad\***, "A disposable and flexible graphene electrode fabricated by inkjet printing of an aqueous surfactant-free graphene oxide dispersion", *Chemistry Letters* **44**[6] (2015) 800-802.
22. Poachanee Norfun, Orn-anong Arqueropanyo, Saisunee Liawruangrath, **Kontad Ounnunkad\***, "Electrochemical flow injection determination of ascorbic acid in fruit samples employing a graphene-polyaniline electrode", *International Journal of Chemical Engineering and Applications (IJCEA)* **7**[2] (2016) 142-145.
23. Kanlaya Pingmuang, Natda Wetchakun, Wiyong Kangwansupamonkon, **Kontad Ounnunkad**, Burapat Inceesungvorn, Sukon Phanichphant\*, "Photocatalytic mineralization of organic acids over visible-light-driven Au/BiVO<sub>4</sub> photocatalyst", *International Journal of Photoenergy* (2013) Vol 2013, Article ID 943256, 7 pages.
24. Songpon Ngamta, Nattakritta Boonprakob, Natda Wetchakun, **Kontad Ounnunkad**, Sukon Phanichphant, Burapat Inceesungvorn\*, "A facile synthesis of nanocrystalline anatase TiO<sub>2</sub> from TiOSO<sub>4</sub> aqueous solution", *Materials Letters* **105** (2013) 76-79.
25. **Kontad Ounnunkad\***, Sukon Phanichphant, "Cellulose-Precursor Synthesis of Nanocrystalline Co<sub>0.5</sub>Cu<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub> Spinel Ferrites", *Materials Research Bulletin* **47**[2] (2012) 473-477.