Ramaraja Pandian Ramasamy Ph.D.

Senior Associate Dean, Professor and Distinguished Faculty
College of Engineering, University of Georgia

A. EDUCATION

2004	Doctor of Philosophy	Chemical Engineering	University of South Carolina, Columbia SC, USA.
2001	Bachelor of Technology	Chemical Engineering	Central Electrochemical Research Institute, India.

B. EXPERIENCE

Academic Leadership Positions: (9 years)

2023 – Present	Senior Associate Dean	College of Engineering, University of Georgia.
2018 – 2023	Associate Dean (Acad)	College of Engineering, University of Georgia.
2023 – 2024	Director (Interim)	Institute for Integrative Precision Agriculture, Univ. of Georgia.
2016 – 2017	Inaugural Chair	School of Chemical, Materials & Biomedical Engineering, UGA.

Non-Academic Leadership Positions: (3 years)

2025 – Present	Founder	PathoSurveil LLC. (biotech start-up)
2022 – 2024	President & President Elect	Institute of Biological Engineering.

Professional Appointments: (25 years)

2020 – Present	Professor	School of Chemical, Materials and Biomedical Engineering, UGA.
2012 – Present	Courtesy Faculty	Department of Chemistry, UGA.
2015 – 2020	Associate Professor	School of Chemical, Materials and Biomedical Engineering, UGA.
2010 – 2015	Assistant Professor	College of Engineering, UGA.
2008 – 2010	Sr. Research Scientist	U.S. Air Force Research Laboratory / Universal Tech Corporation.
2005 – 2008	Research Associate	Dept. of Mechanical Engineering, Penn State University.
2004 – 2005	Post-Doctoral Fellow	Dept. of Chemical Engineering, University of South Carolina.
2001 – 2004	Graduate Assistant	Dept. of Chemical Engineering, University of South Carolina.

C. AWARDS, HONORS AND RECOGNITIONS

- ***President,*** Institute of Biological Engineering, 2023. (IBE is a scientific professional society).
- ***Fellow,*** Institute of Biological Engineering.
- ***Fellow,*** South Eastern Conference (SEC) Universities Academic Leadership Development Program, 2021.
- ***Fellow,*** Society for the Advancement of Electrochemical Science and Technology.
- ***Presidential Citation,*** Institute of Biological Engineering, 2021.
- ***Stanford's Top 2% Scientists*** in the world.
- ***Distinguished Faculty,*** College of Engineering, University of Georgia, 2022.
- ***Distinguished Researcher Award,*** Indian Institute of Chemical Engineers, 2016.
- ***Young Scientist Award,*** Biosensor World Congress, 2012.
- ***Distinguished Alumni Award,*** CECRI, India.
- ***Creative Research Award,*** BattSolar.

D. PROFESSIONAL MEMBERSHIPS

Current:

- American Society for Engineering Education. (current)
- The Electrochemical Society. (current)
- Institute of Biological Engineering. (current)
- International Society for Electrochemistry. (current)
- International Association of Food Protection. (current)

- National Academy of Inventors UGA Chapter. (current)

Past:

- Society for Advancement of Electrochemical Science and Technology, India. (past)
- American Chemical Society, USA. (past)
- American Institute of Chemical Engineers, USA. (past)
- Sigma Xi. (past)

E. CAREER SYNOPSIS

Administration: 9+ years of progressive leadership experience at a major public flagship university starting as Department Chair and then as Associate Dean, Sr. Associate Dean and Institute Director. Possess deep knowledge of complex operations in a multi-campus public university.

Research: 200+ journal articles and conference presentations, 11 patents, 53 graduate students, 50+ invited talks, 25 research and education grants, 1 technology start-up.

Teaching: Developed 6 new courses for biological engineering curriculum and instrumental in development of multiple degree programs.

Service: 40+ university service activities, serve in 1 journal editorial board, chaired 10+ symposia in scientific meetings, served in 20+ grant agency panels, reviewed 250+ journal articles, engaged in number of outreach and educational programs.

F. LEADERSHIP & ADMINISTRATIVE EXPERIENCE (recent first)

F1) Senior Associate Dean & Associate Dean, College of Engineering, UGA (2018 - Present)

Summary of Major Accomplishments:

- Led the engineering college through a rapid growth graduate enrollment - 170% growth in 5 years.
- Increased college-funded graduate assistantships by 300% during my tenure as Associate Dean.
- Implemented strategies that improved the graduate engineering rankings by nearly 40 spots.
- Developed multiple seed grant and faculty support programs with 3X UGA average investment per faculty.
- Developed a robust summer instructional program that increased summer enrollment by over 500%.
- Funded and assisted faculty in the development of 20 online courses to prepare for future contingencies.
- Played a key role in facilitating the merger of Computer Science with College of Engineering in 2022.
- Led the ABET accreditation effort for all 8 undergraduate programs in the college in 2021 (2022 cycle).
- Oversaw the curricular development and approval of 4 Ph.D. and 4 M.S. programs through the GA BOR.
- Led the implementation of online, hybrid, hyflex instruction for over 500 course sections during COVID.
- Participated in 50+ faculty searches including 2 Deans, 4 Associate/Assistant Deans and 4 Dept Heads.
- Led the development of many college policies related to academic, curricular, faculty and graduate affairs.
- Developed 'learning the ropes' mentoring plans for URM faculty through Aspire Alliance IChange project.

Key Responsibilities:

- Oversee most internal functions in college including research, academic, faculty and some student affairs.
- Supervise a team of 2 Assistant Deans on academic, faculty, graduate affairs, outreach and partnerships.
- Focus is on growth of the college in strategic areas, forge partnerships and improve rankings.
- Engage with development team and faculty to attract industry sponsored research grants.
- Administrative Affairs – academic policies, external partnerships, budgeting for departments etc.
- Research Affairs – oversee engineering research of nearly $45M in sponsored awards in FY24.
- Graduate Affairs – recruitment, admissions, assistantships, grievances and other graduate student affairs.
- Curricular Affairs – new degree programs, new course proposals, curricular approval governance.
- Faculty Affairs – faculty appointments, promotion, tenure, post-tenure review, professional development.
- Student Affairs – secondary admissions, academic enhancement, probation, retention, progression.
- Instructional Management – classroom scheduling, enrollment management, summer instructions.

- **Assessment and Accreditation** – ABET, SACSCOC, US NEWS, ASEE reporting and effectiveness assessment.
- **Fundraising** – fundraising through industry research projects, graduate fellowships and entrepreneurship.
- **Financial** – budgeting for departments (schools), graduate programs budgets, student support funding.
- **Inclusive Excellence** – GEM graduate scholarships, building bridges to HBCU, ASPIRE I-Change taskforce.
- **COVID Response** – hybrid/hyflex management, classroom safety compliance, online instructional support.

Research, Innovation and Entrepreneurship Functions:

- Directly oversee the research affairs in the college and supervise pre-award staff in proposal submissions.
- Manage all internal seed grant and faculty support programs in the college.
- Assist faculty in connecting with external research partners and sponsors for collaborative projects.
- Promote internal collaboration among various UGA colleges for strategic research growth.
- Seek input from faculty advisory committee for the research office to improve our research operations.
- Lead committee of fellows for supporting the professional development of faculty.
- Served on UGA's Innovation District launch team, a hub of entrepreneurial activities in the university.
- Support student research activities through internships and experiential learning opportunities.

Administrative Affairs Functions:

- Manage all internal academic functions of the college with 4 interdisciplinary schools, 5236 students, 173 faculty members and 60 staff members, 10 B.S. degrees, 11 M.S. degrees and 6 Ph.D. degrees.
- Oversee the support for 4 school chairs, graduate coordinators and academic staff in academic functions.
- Manage academic office budget, provide TA support to departments, summer support for faculty.
- Work with Dean to allocate budget for the schools (departments) within the College of Engineering.
- Work with Dean and school chairs on strategic planning process for college and schools.
- Manage $1.5M operational budget for academic and research offices to support college-wide programs.

Academic & Curricular Affairs Functions:

- Policies – Develop and implement all policies related to academic and curricular affairs.
- Curriculum – Oversee college curriculum committee to approve new courses, programs, degrees.
- Operation – Oversee enrollment management, classroom scheduling, instructional assignments.
- Admission – Manage secondary admissions process in the college, oversee admissions and transfer.
- Advising – Coordinate academic advising functions with the academic advisors in all schools.
- Partnerships – Liaison for external academic collaborations with K12, MOUs as well as 3+2, 4+1 dual degree partnerships with other regional colleges and universities through REPP.

Assessment & Accreditation Functions:

- Oversee ABET and SACSCOC accreditation process of all 20 degree programs in the college.
- Oversee reporting of data to ASEE, US NEWS engineering ranking surveys.
- Manage assessment of internal certificate and research programs involving graduate students.

Graduate Affairs Functions:

- Serves as graduate coordinator for college, oversee graduate recruitment and all graduate student affairs including assistantships, financial aid, TA assignments and external awards.
- Manage all internally funded assistantships in the college of engineering including RA, TA and fellowships.
- Provide leadership for development of new MS and PhD degree programs in the college of engineering.
- Worked with development team to assist securing industry funding for graduate assistantships.

Undergraduate Student Success Activities Functions:

- Handle academic probation, dismissals and academic dishonesty student appeals for readmission.
- Implement intervention programs to increase student retention and graduation rates.
- Coordinate student success initiatives with and office of experiential learning and division of academic enhancement, assist with students' mental health and well-being programs.
- Served as instructor for experiential learning and internships courses in the college.
- Identify 'at-risk' students, and develop strategies to increase student retention and graduation rates.
- Facilitate transfer admissions process through Regents Engineering Pathway with other institutions.

Faculty Affairs Functions:

- Hiring – Participated in 114+ faculty searches at UGA, including 4 Deans and 4 Department Heads.
- Tenure & Promotion – Administer faculty P&T, post-tenure review processes for all college faculty.
- Faculty Appointments – Administer adjunct faculty appointment and review process in the college.
- Mentoring – Coordinate new faculty mentoring plan with school chairs and Research Associate Dean.
- Professional Development – Assist faculty with professional development programs and activities.

Diversity, Equity and Inclusive Excellence Functions:

- Served on UGA committee for Aspire Alliance IChange Network to promote URM STEM faculty excellence.
- Collaborate with schools in URM faculty recruitment through 'Emerging Scholar' program.
- Ensure diversity in faculty recruitment, through implicit bias training for search committees.
- Recruitment of minority graduate students through GEM, SECDEIF fellowships and PSLAMP programs.
- Provide financial support for professional club activities of many URM student groups.

Development & Fundraising Functions:

- Leading a campaign for 50+ graduate assistantships to the college of engineering.
- Leads industry gift and partnerships for research and related services for college of engineering.
- Helped secure gifts and contracts from Delta TechOps, Cox Automotive, Georgia Power etc.
- Helped securing $100k gift from Honda in support for Climate-Smart Manufacturing for a faculty member.
- Participated in the Innovation District Launch Team for engagement with large industry sponsors which resulted in multiple gifts including a $2M donation from Delta for Innovation Districts initiative.
- Worked with college's development team for engagement with industry for faculty research support from Delta, graduate fellowships from Gulfstream.
- Awarded grants over $4M from federal, state, industry and private sponsors for scholarly research.

F2) Title: Interim Co-Director, Institute of Integrative Precision Agriculture (IIPA), UGA (2023 – 2024)

- Membership – Oversaw the growth of IIPA as one of UGA's largest institutes with 76 members.
- Research – Awarded pre-seed and seed funding totaling $700k to faculty for interdisciplinary projects.
- Hiring – Co-lead the search for hiring the permanent Director of IIPA and an GRA Eminent Scholar.
- Programming – Oversaw all programming at IIPA, including a retreat, 2 symposia and seminar series.
- Outreach – Oversaw the various outreach and marketing initiatives of the institute.
- Advisory Board – Oversaw the formation of preliminary advisory council for the institute.

F3) Title: Inaugural Chair, School of Chemical, Materials and Biomedical Eng. (CMBE), UGA (2016-2017)

- Leadership – Lead a department of 16 faculty members, and 450 undergraduate and graduate students in an inaugural leadership role. Created a permanent name for the newly formed school.
- Hiring – Administered new faculty searches that lead to the hiring of 2 minority faculty members.
- Administration – Managed student enrollment, academic advising, worked on ABET accreditation, devised plans to increase graduate enrollment, the seminar series, and graduate student association, engaged with advisory boards and collaborated with industry partners for capstone projects, and worked closely with the Dean's office and other schools to leverage college's resources for the CMBE's growth and success.
- Policies - Oversaw various internal committees, developed academic polices for the newly formed school.
- Instruction – Implemented a major instructional assignment restructuring that resulted in the reduction of teaching load for all faculty in the School of Chemical, Materials and Biomedical Engineering.

F4) Title: President, Institute of Biological Engineering (2023 – 2024)

- Provided leadership to all divisions, committees and council members of the society.
- Engaged in a robust fundraising operation for the society through outreach to industry and academia.
- Oversaw the management transition to implement new administrative processes to the society.
- Attracted significant investments to place the society in its strongest financial position in 15 years.

- Ran a successful membership campaign that resulted in records number of life time members.
- Prepared the society for ABET membership to enable accreditation of biological engineering programs.

G. INSTITUTIONAL SERVICE

G1) University Service:

- Leadership Council on Artificial Intelligence (2024 - Present)
- Task Force for Preeminence in Health and Medicine (2024 - Present)
- Steering Committee, Institute for Integrative Precision Agriculture (2024 – Present)
- Search Committee, VP for Research (2024)
- Search Committee, IIPA Director (2024)
- Search Committee, Vice Provost for Enrollment Management (2023)
- Faculty Affairs Advisory Committee (2022 – 2023)
- Aspire Alliance IChange Network for Promoting Diversity Committee (2020 – 2022)
- SLO Assessment Committee (2018 – Present)
- Educational Affairs Committee (2019 – Present)
- Global Engagement Academic Affairs Committee (2018 – Present)
- Member, Center for Food Safety (2016 – Present)
- Entrepreneurship Certificate Program Advisory Committee (2015 – Present)
- Member, Center for Metalloenzymes (2013 – Present)
- Search Committee, Vice President for Instruction (2022)
- Administrative Review Committee, Vice President for Instruction (2021)
- Online Education Working Group (2020 - 2021)
- School of Computing Task Force (2020 - 2022)
- Liaison, University Strategic Planning Committee (2019 – 2020)
- Member, Innovation District Launch Team and Task Force (2018 – 2021)
- University Research Safety Committee (2016 – 2019)
- Member, University Libraries Committee (2015 – 2018)
- Faculty Mentor, Peach State LSAMP Program (2012 – 2015)
- Faculty Mentor, CURO Engineering Program (2011 – 2015)
- Organizer, FYO Hydrogen Day (2012 – 2015)
- Member, NanoSEC Seminar Series Committee (2010 – 2014)
- Participant, K12 - STEM Teachers Workshop (2011 – 2015)

G2) College / Department Service:

• Chair:	3rd Year Review Committee	02/2018 – 02/2018
• Member:	Professor of Practice Committee	10/2017 – 12/2017
• Member:	3rd Year Review Committee	09/2017 – 09/2017
• Member:	Multiple Faculty Search Committees	08/2014 – Present
• Member:	Graduate Student Stipend Committee	03/2012 – 12/2012
• Member:	Faculty & Staff Awards Committee	01/2012 – 12/2012
• Member:	BCHE Curriculum Committee	08/2010 – 12/2014
• Co-organizer:	BCHE Graduate Seminar Series	02/2014 – 12/2014
• Advisor:	Engineering Graduate Students	08/2010 – Present
• Advisor:	Engineering Undergraduate Students	08/2010 – 08/2012
• Faculty Advisor:	IAHE-UGA Chapter	06/2014 – 12/2016

- Engaged in other activities such as faculty search, graduate student recruiting for the College.
- Participated in over 60+ faculty searches within the college of engineering since 2010.

H. NON-INSTITUTIONAL PROFESSIONAL SERVICE AND OUTREACH

H1) Leadership Roles:

- President, Institute of Biological Engineering.
- Vice Chair, American Society for Engineering Education, Southeastern Section, Chemical Engineering.

H2) Editorial Service:

- Editorial Board, Biosensors Journal.
- Guest Editor for Sensors Journal, for Special Issue ' Biosensors for Food Safety'.
- Guest Editor for Fall 2015 issue of 'Interface', the flagship magazine of the Electrochemical Society.

H3) Technical Consultant Service:

- Fuel cell project at University of North Georgia.

H4) Professional Service:

- Executive Council: Institute of Biological Engineering.
- Executive Committee: Member, Energy Technology Division, Electrochemical Society.
- Executive Committee: Member, IEEE Division, Electrochemical Society.
- Executive Committee: Member, Sensors Division, Institute of Biological Engineers.

H5) Symposia:

- Chair: 2010 AIChE Annual Meeting, Salt Lake City. (Session: Energy for Composites).
- Chair: 2011 219th ECS Meeting, Montreal. (Session: Electrochemical Engineering).
- Chair: 2012 221th ECS Meeting, Seattle. (Session: Biological Fuel Cells V).
- Chair: 2014 225th ECS Meeting, Orlando. (Session: Biological Fuel Cells VI).
- Chair: 2017 232nd ECS Meeting, National Harbor. (Session: Energy Water Nexus).
- Chair: 2017 232nd ECS Meeting, National Harbor. (Session: Value Added Chemicals).
- Chair: 2018 233rd ECS Meeting, Seattle. (Session: Battery & Energy Technology Session).
- Chair: 2020 25th Annual Meeting of the Institute of Biological Engineering, Athens.
- Chair: 2021 239th ECS Meeting, Chicago and IMCS 18. (Session: Biosensors for Food and Agriculture).
- Chair: 2021 Annual Meeting of the Institute of Biological Engineering.

H6) Funding Agency Grant Proposal Reviewer (National):

- National Science Foundation (17 times)
- National Institute of Food and Agriculture (USDA), USA. (5 times)
- U.S. Department of Energy, USA. (5 times)

H7) Funding Agency Grant Proposal Reviewer (International):

- Qatar National Research Foundation, Qatar. (2 times)
- National Science Centre (Narodowe Centrum Nauki), Poland. (1 time)
- Kuwait Foundation for the Advancement of Sciences (KFAS), Kuwait. (2 times)
- Academy of Sciences for the Developing World (TWAS), Italy. (1 time)

H8) Book Reviewer:

- Encyclopedia of Food, Agricultural and Biological Engineering.
- 'Fuel Cell Engines' textbook by M. Mench, John Wiley & Sons.

H9) Journal Reviewer:

(Reviewed over 250 articles for over 85 journals some of which are listed below)

Agriculture Food and Analytical Bacteriology; American Journal of Experimental Agriculture; Analytica Chimica Acta; ACS Analytical Chemistry; ACS Applied Materials & Interfaces; ACS Catalysis; ACS Chemical Reviews; ACS J. Agricultural and Food Chemistry; ACS Nano; ACS Omega; ACS Sensors; Biochemical Engineering Journal; Bioelectrochemistry; Biomolecules; Biosensors; Biotechnology Progress; Bioresource Technology; Biotechnology and Bioengineering; Biosensors and Bioelectronics; Carbon; ChemElectroChem; Chemical Papers; Chemistry Central; Chemosensors; Colloids and Surfaces B; Composite Interfaces; Current

Medicinal Chemistry; Current Nanoscience; Electroanalysis; Environmental Science and Technology; Energy and Environmental Science; Electrochemical and Solid State Letters; Electrochemistry Communications; Electrochimica Acta; Electrochemistry Letters; Food Control; Frontiers in Energy; Fuel Cells; IEEE Sensors; International J. Biomedical Science; International J. Hydrogen Energy; International J. Nanomedicine; J. Advanced Research; J. American Chemical Society; J. Applied Electrochemistry; J. Applied Microbiology; J. Biological Engineering; J. Biological Macromolecules; J. Bioscience and Bioengineering; J. Biotechnology; J. Coatings Technology; J. Electrochemical Society; J. Experimental Agriculture International; J. Industrial and Engineering Chemistry; J. Materials Research; J. Material Science and Technology; J. Membrane Science; J. Nanobiotechnology; J. Nanoscience and Nanotechnology; J. Pharmaceutical and Biomedical Analysis; J. Physics and Chemistry of Solids; J. Power Sources; J. Renewable Energy; J. Renewable and Sustainable Energy; J. Materials Chemistry A; J. Materials Science and Technology; J. Solid State Electrochemistry; Langmuir; Materials Science; Materials Science and Engineering B; Microelectronic Engineering; Nanoenergy; Nanomaterials; Nature Communications; Nature Energy; Nature Microsystems & NanoEngineering; Nature Scientific Reports; Plant Methods; Physical Chemistry Chemical Physics; PLOS One; Post Harvest Biology and Technology; Progress in Organic Coatings; Science of the Total Environment; Sensors; Surfaces and Interfaces; Talanta; Trends in Food Science and Technology.

H10) Outreach and Public Service:

- UGA Physics Learning Community - Participated in a workshop to introduce research to K12 teachers.
- Georgia Science Fair - Judged many science fair activities over past several years.
- Offered Women Electrochemical Engineer fellowship for High School Student & Teachers (2019).

I. RESEARCH INTERESTS

Currently direct the Nano-Electrochemistry Research Lab in a 2500 sq.ft of research space with 6 graduate students and 1 scientist. Research interests broadly lie in the following areas of electrochemical engineering:

- Chemical and biosensors – point of care biosensors for medical, food safety and agricultural applications.
- Bioelectrochemical systems – biological solar cells, microbial electrolyzers and fuel cells.
- Electrochemical power sources – next generation battery chemistries, fuel cell design and engineering.
- Nanostructured composites – materials and catalysts for fuel cells, CO_2 reduction, photovoltaic materials.

J. RESEARCH GRANTS FUNDED (* Active Grants)

#	Period	Title	Source	Amount	Role
27	01/2026 – 12/2029	Development of method to analyze glycosylation during biomanufacuring..	Boehringer-Ingelheim Inc.	$165,000 *	PI (100%)
26	07/2025 – 06/2026	Incidence, Enumeration and Confirmation of Listeria spp and Salmonella spp…	Center for Food Safety	$35,000 *	PI (100%)
25	01/2025 – 06/2026	Impact of User behavior on Electric Vehicle Battery Health	Georgia Network for Electric Mobility	$66,000 *	PI (65%)
24	01/2025 – 06/2026	Physically Informed Machine Learning for Health Monitoring of Li-ion Batteries	Georgia Network for Electric Mobility	$66,000 *	Co-PI (50%)
23	01/2024 – 12/2026	PFI: Development of Prototype for Rapid Diagnosis of Food-Borne Pathogen	National Science Foundation	$500,000 *	PI (100%)
22	01/2024 – 12/2024	ICORPS: Development of Prototype for Rapid Diagnosis of Food-Borne Pathogen	National Science Foundation	$50,000 *	PI (100%)
21	01/2024 – 12/2024	Bioengineering for One Health (Conference Grant)	NIFA-AFRI (USDA)	$50,000	Co-PI (50%)
20	07/2023 – 06/2024	Chemical Recovery and Reuse of Lithium Ion Battery Materials for EV Applications	Georgia Network for e-Mobility	$55,000	PI (50%)
19	01/2023 – 12/2024	Development of Rapid Diagnostic Platform for Detection of Noroviruses	Center for Food Safety	$45,000	PI (75%)

18	10/2023 – 12/2024	Electrophage Technologies – Phase 1B	Georgia Research Alliance	$25,000	PI (100%)
17	03/2022 – 02/2023	Confidential Project	Confidential	$250,000	PI (100%)
16	1/2022 – 12/2022	Electrophage Technologies – Phase 1A	Georgia Research Alliance	$25,000	PI (100%)
15	4/2020 – 3/2025	REEU: FACT-Interdisciplinary Undergraduate Training in Modern Agriculture	NIFA-AFRI (USDA)	$500,000 *	PI (100%)
14	1/2020 – 12/2021	Listeria Contamination Detection in Dry Environments	Center for Food Safety	$30,000	PI (100%)
13	1/2015 – 12/2020	Enzyme Based Nanocomposites for Highly Selective Detection of Fungi Infections	NIFA-AFRI (USDA)	$496,192	PI (65%)
12	1/2017 – 12/2018	Understand Light Wavelength Impact on Plant Growing Cycles to Increase Efficiency	Southern Company	$100,000	PI (100%)
11	1/2017 – 6/2018	AIR-TT: Development of a Portable Sensor for Rapid Detection of Crop Diseases	National Science Foundation	$200,000	PI (100%)
10	8/2016 – 7/2018	A Novel Method for Simultaneous Enrichment & Detection of Bacteria	National Science Foundation	$150,314	PI (100%)
9	1/2016 – 12/2017	Low-Cost High Performance Energy Storage for Renewable Power Generation	Southern Company	$100,000	PI (100%)
8	07/2012 – 06/2018	Enzymatic Biosensing of Crop Volatiles for Detection of Plant Diseases	ACS Frasch Foundation	$250,000	PI (100%)
7	11/2014 – 04/2016	I-Corps: Commercialization of a Portable Sensor for Crop Disease Detection	National Science Foundation	$50,000	PI (100%)
6	07/2012 – 06/2016	A Novel Bi-enzyme System for Amperometric Biosensing	National Science Foundation	$320,000	PI (97%)
5	11/2012 – 04/2013	Nanostructured Carbon Nanosheet Electrode for Enzymatic Fuel Cells	Army Research Office (STTR-1)	$100,000 UGA-$38k	PI @UGA (100%)
4	07/2012 – 06/2013	Manipulating Photosynthesis for Electricity Generation	UGARF Faculty Research Grant	$10,000	PI (100%)
3	07/2013 – 06/2013	Harvesting Energy from Cholesterol for Implantable Fuel Cells	UGARF Faculty Research Grant	$10,000	PI (100%)
2	06/2008 – 05/2009	SGER: Bio-electrochemical Energy Conversion Processes	National Science Foundation	$75,000	Co-PI (33%)
1	05/2008 – 08/2008	Evaluation of Electrocatalytic Activity of Non-precious Metals	Monsanto Corporation	$35,000	Co-PI (50%)

Grants Funded as Co-Investigator

#	Period	Title	Source	Amount	Role
3	01/2014 – 12/2017	REU –Nanotechnology & Biomedicine	NSF	$300,000	Sr. Personnel
2	07/2014 – 06/2015	Strategic Initiative 'Agricultural Sensing Initiative'	UGA	$50,000	Co-PI
1	07/2014 – 06/2015	Strategic Initiative 'Catalytic Conversion of CO_2'	UGA	$50,000	Co-PI

K. INSTRUCTIONAL GRANTS AND AWARDS

#	Period	Title	Source	Amount	Role and Details
7	05/2022 – 12/2022	HEC Graduate Engineering Fellowship	HEC	$124,750	PI. The purpose of this grant is to modify existing and enhance existing courses.
6	08/2022 – 12/2022	Teaching Enhancement & Innovation Funds	UGA	$18,550	PI. The purpose of this grant is to modify existing and enhance existing courses.
5	07/2022 – 06/2023	Teaching Enhancement & Innovation Funds	UGA	$18,550	PI. The purpose of this grant is to modify existing and enhance existing courses.

4	07/2021 – 06/2022	Teaching Enhancement & Innovation Funds	UGA	$15,621	PI. The purpose of this grant is to modify existing and enhance existing courses.
3	07/2016 – 06/2018	Women Electrochemical Engineer Fellowship	NSF	$8,000	PI (100%). The purpose is to train female high school students & teachers.
2	05/2018 – 08/2018	Innovative & Inter disciplinary Res. Grant	UGA	$1,000	Faculty Mentor for Grad Students.
1	05/2013 – 08/2013	Innovative & Inter disciplinary Res. Grant	UGA	$1,000	Faculty Mentor for Grad Students.

L. MENTORING AND SUPERVISION

Research Scientist (1)

- B. Suganthan 01/2024 – Present

Post-Doctoral Supervisor (4)

- Yan Zhou 05/2018 – 08/2018 Current Position: Professor, Xi'an Jiaotong University, China.
- Yi Fang 08/2017 – 12/2018 Current Position: Scientist, New England Biolabs Inc., Boston.
- James Manuel 12/2016 – 12/2017 Current Position: Post-doc, Michigan Tech University.
- Y. Umasankar 08/2011 – 06/2014 Current Position: Research Faculty, Florida International University.

Ph.D. Students (32)

- Matthew Boren 08/2025 – Present Biomedical Engineering. Role: Dissertation Chair.
- Adithi Bhadauria 08/2023 – Present Biomedical Engineering. Role: Dissertation Chair.
- Dilmeet Kaur 08/2022 – Present Biomedical Engineering. Role: Dissertation Chair.
- Sankar Venkat 08/2022 – Present Mechanical Engineering. Role: Dissertation Chair.
- Anna Baber* 08/2022 – Present Biomedical Engineering. Role: Dissertation Chair.
- Sanket Nagdeve 08/2021 – Present Biochemical Engineering. Role: Dissertation Chair.
- April Rains* 08/2020 – 12/2025 Chemistry Role: Dissertation Chair.
- Ashley Galanti 01/2023 – 12/2025 Biomedical Engineering. Role: Dissertation Chair.
- Or Zolti 01/2019 – 12/2024 Bio & Agri Engineering. Role: Dissertation Chair.
- Bavi Suganthan 08/2017 – 12/2022 Bio & Agri Engineering. Role: Dissertation Chair.
- Hamid Asadi 08/2018 – 05/2022 Bio & Agri Engineering. Role: Dissertation Chair.
- Yan Zhou 08/2012 – 05/2018 Chemistry. Role: Dissertation Chair.
- Yi Fang 08/2012 – 07/2017 Bio & Agri Engineering. Role: Dissertation Chair.
- Narendran Sekar 08/2012 – 07/2016 Bio & Agri Engineering. Role: Dissertation Chair.
- Anwesha Barua* 08/2016 – 12/2016 Bio & Agri Engineering. Role: Dissertation Chair.
- Maryam M* 01/2015 – 05/2015 Engineering. Role: Dissertation Chair.
- Mengqi Zhang* 08/2014 – 12/2015 Chemistry. Role: Dissertation Chair.
- N. Sirisha Parimi* 08/2010 – 12/2011 Bio & Agri Engineering. Role: Dissertation Chair.
- S.V. Thumallapalli 08/2025 – Present Mechanical Engineering. Role: Committee Member
- Amit Kumar 05/2025 – Present Physics. Role: Committee Member
- Xinyu Gong 08/2021 – Present Biochemical Engineering Role: Committee Member
- Pirmin Hilbrand 08/2021 – 12/2022 Mechanical Engineering. Role: Committee Member.
- Yanjun Yang 08/2018 – 12/2024 Physics. Role: Committee Member.
- Pauline Howell 05/2015 – 05/2020 Chemistry. Role: Committee Member.
- Jin Jung 05/2014 – 05/2019 Chemistry. Role: Committee Member.
- Daoyuan Yang 08/2017 – 05/2020 Food Science & Technology. Role: Committee Member.
- Harshani N.R. 01/2016 – 08/2018 Chemistry. Role: Committee Member.
- Qi Han 07/2015 – 05/2018 Bio & Agri Engineering. Role: Committee Member.
- Ali Halalipour 08/2014 – 12/2016 Food Science & Technology. Role: Committee Member.
- Gregory Neher 04/2014 – 12/2019 Chemistry. Role: Committee Member.
- Rachit Jain 08/2012 – 05/2015 Bio & Agri Engineering. Role: Committee Member.
- Yuheng Lin 08/2012 – 12/2014 Bio & Agri Engineering. Role: Committee Member.

* These students discontinued mid-way for various reasons.

M.S. Students (17)

- Adedeji Adedokun 01/2026 – Present Biological Engineering. Role: Thesis Chair.
- Austin Duncan 08/2021 – Present Mechanical Engineering. Role: Thesis Chair.
- Alexa Hansen 02/2022 – 05/2024 Biological Engineering. Role: Thesis Chair.
- Dominik Groh 08/2022 – 12/2022 Engineering. Role: Thesis Chair.
- Alyssa Ghuman 01/2017 – 12/2018 Biological Engineering. Role: Thesis Chair.
- Jarryd Ashby 08/2012 – 07/2016 Chemistry. Role: Thesis Chair.
- Robert Wainright 08/2013 – 07/2015 Biochemical Engineering. Role: Thesis Chair.
- Shakshi Chhabra 01/2011 – 05/2012 Statistics Role: Thesis Chair.
- Jessica Calkins 08/2011 – 12/2012 Biochemical Engineering. Role: Thesis Chair.
- Jacoby Simpson 08/2022 – 12/2024 Biochemical Engineering. Role: Committee Member.
- Daniel Hampson 08/2022 – 12/2024 Mechanical Engineering. Role: Committee Member.
- Kaustubh Rajput 08/2020 – 12/2021 Computer Science. Role: Committee Member.
- James Wilfong 08/2020 – 12/2020 Mechanical Engineering. Role: Committee Member.
- Jaya Kanumari 08/2014 – 05/2016 Biochemical Engineering. Role: Committee Member.
- Qin Huang 08/2011 – 05/2013 Biochemical Engineering. Role: Committee Member.
- Krishna Ganesh 08/2010 – 05/2012 Environmental Engineering. Role: Committee Member.
- E. Rajaraman 08/2010 – 05/2012 Biochemical Engineering. Role: Committee Member.

Visiting Research Scholars (4)

- Kwun Nam Hui (Professor) University of Macau, Macau. 06/2026 – 08/2026
- Baviththira Suganthan (M.S.) Kelaniya University, Srilanka. 01/2017 – 07/2017
- Jaoquin Atalah (M.S.) Fundacion Biociencia, Chile. 05/2016 – 08/2016
- Tharun Kumar Konduru (M.S.) Advisor: Charlie Li, UGA. (BioCh. Eng) 03/2011 – 07/2011

Undergraduate Researchers (60+)

- Michael Sage (Biochemical Engineering) 08/2025 – Present
- Sachintha Ashok (Biochemical Engineering) 08/2022 – Present
- Adedeji Adedokun (Biological Engineering) 05/2024 – 08/2024
- Ashley Galanti (Electrical Engineering) 01/2022 – 12/2022
- Dhaivil Patel (Biochemical Engineering) 05/2019 – 12/2019
- Thomas Spoerer (Environmental Engineering) 04/2018 – 12/2019
- Dhara Patel (Biochemistry) 01/2017 – 12/2019
- Nicholas Szaro (Chemistry) 05/2016 – 12/2017
- Summer Smith (Biochemical Engineering) 05/2016 – 07/2016
- Nicholas Stom (Biochemical Engineering) 01/2015 – 12/2015
- Leigh Karas (Biochemical Engineering) 01/2015 – 12/2015
- Bryan Grommersch (Biochemical Engineering) 05/2014 – 07/2015
- David Flake (Biochemical Engineering) 08/2012 – 05/2014
- Robert Wainright (Biological Engineering) 05/2012 – 07/2013
- Monica LaGatta (Microbiology) 05/2012 – 07/2012
- Elvin Samuel (Biological Engineering) 05/2012 – 08/2012
- Sloan Lipman (Biochemical Engineering) 08/2012 – 12/2012
- Shannon Clark (Biochemical Engineering) 08/2012 – 12/2012
- Brian Schmidt (Biochemical Engineering) 05/2011 – 08/2011
- 42 other REU students not mentioned in the list above.

M. POPULAR MEDIA RECOGNITION

Radio:

- Australian National Radio, 6/16/2013. ‘Produce electricity from plants’.
- GPB Radio, 9/3/2012. ‘7:00 AM News: Researchers develop pest, disease, plant sensors’.

News Papers & Magazines: (selective list only)

- NBC National News, 5/13/2013. 'Photosynthesis interrupted'.
- Agri-View, 5/20/2015. 'Grants stimulate futuristic nanotechnology'.
- Popular Mechanics, 3/17/2014. 'The world's first bionic plant'.
- Times of India, 5/10/2013. 'Soon, plants to help generate electricity'.
- Athens Banner-Herald Newspaper, 6/8/2013. 'A new kind of power plant'.
- Resource Magazine, Vol 20, 6, p 26, 11/2013, 'UGA researchers explore how to ….'.
- Athens Banner-Herald, 8/27/2012. 'UGA scientists developing a sensor for signs of plant…'.
- Environmental Monitor Magazine, 8/27/2012. 'UGA developing sensors to detect stressed…'.
- Southeast Farm Press Magazine, 8/9/2012. 'Crop sensor would reduce pesticide use, expenses'.
- Sensors & Systems Magazine, 8/16/2012. 'A sensor to detect when plants are under attack'.

Online Media: (selective list only)

- Scientific American Blogs, 6/5/2013, 'Power plants'.
- Treehugger, 5/13/2013, 'Researchers discover new way to harvest electricity from plants'.
- Gizmag, 5/10/2013, 'Plug into a plant; a new approach to clean energy harvesting'.
- Nature World News, 5/9/2013, 'System to make plants generate electricity developed at UGA'.
- Live Science, 8/9/2012, 'Sensor could detect plant distress signals'.

N. PROFESSIONAL DEVELOPMENT TRAINING & CERTIFCATIONS

- Leadership Development:
  - SEC - Academic Leadership Development Program Fellow (ALDP)
  - SEC / IMA - Certificate in Multicultural Mentoring.
  - UGA - New Department Head Training Certificate
  - UGA – Leadership Institute Certificate
  - UGA – New Administrator Training Certificate
- Research:
  - Export Compliance Certification (Completion Report, Certificate)
  - CITI – Responsible Conduct of Research (Completion Report, Certificate)
- Accreditation & Assessment:
  - ABET - Certification for Fundamentals of Program Assessment
  - ABET - Certification for Advanced Program Assessment
- Diversity & Inclusion Certificate:
  - DEI – Beyond the Numbers
  - DEI – Emotional Intelligence
  - DEI – Unconscious Bias
  - DEI – Deepening Diversity Dialogues
  - DEI – Organizational Excellence Through Diversity
  - DEI – True Colors

O. TEACHING RESPONSIBILITIES

(a) New Courses Developed for BCHE/BIOE Curriculum

- BCHE/BIOE 8610 Bioelectroanalytical Techniques (3 Credits)
- BCHE 2910 Introduction to Biochemical Engineering Design (3 Credits)
- BCHE 4710/6710 Bio-electrochemical Engineering (3 Credits)
- BCHE 4180 Advanced Biochemical Engineering Lab (3 Credits
- BCHE 4990 Undergraduate Thesis in Biochemical Engineering (2 Credits)

(b) Courses Taught at UGA

Course Name & Credit Hours	Semesters Taught	Notes
Grad FIRST Seminar	Fall 2022 – Fall 2024	Newly developed graduate course.
Bioelectro analytical Techniques (3)	Spring 2012 – 2018	Newly developed graduate course.

Intro. to Biochemical Eng. Design (3)	Fall 2010 - 2021	Newly developed course.
Bio-electrochemical Engineering (3)	Spring 2012 – 2018	Newly developed split level course.
Adv. Biochemical Engineering Lab (3)	Spring 2013 - 2017	Newly developed lab course.
Undergraduate Thesis in BCHE (3)	Fall 2012 – 2016	Research course for undergraduates.
First Year Odyssey (1)	Fall 2012 – 2020	University wide freshman course.
CURO Undergraduate Research (2)	Spring 2013 - 2016	Research course for undergraduates.
Introduction to Engineering (1)	Fall 2015 - 2017	Guest lecturer for this course.
Engineering Co-op and Internship	Fall 2017 - 2019	Experiential course for undergraduates.
Nanotechnology (3)	Fall 2013 - 2017	Guest lecturer for this course.

(c) New Courses Developed for University Curriculum

- FYO 1001 First Year Odyssey Seminar (1 Credit): [FALL 2012 - 2013]

(d) Other Course Contributions (Guest Lectures)

- PHYS 4800/6800 Nanotechnology (3 Credits): [FALL 2013 – 2017]
- ENGR 1920 Introduction to Engineering (1 Credit): [FALL 2015 – 2017]

(e) Curriculum Development

Actively involved in providing assistance and suggestions to the biochemical engineering curriculum committee on issues related to new course development, curriculum modifications, and credit hour adjustments etc. Also been involved in the development of biochemical engineering graduate curriculum including research based electives and graduate seminar series.

P. INVITED TALKS AND SEMINARS

(a) Keynote and Invited Presentations at Professional Society Meetings

1. R.P. Ramasamy, 'Electrochemical Sensors for Food and Agriculture Applications', Southeastern Section of AOAC Meeting, Atlanta, GA, Apr 3, 2024. **(Invited)**
2. R.P. Ramasamy, 'Nanotechnology for Food and Agriculture', Southeastern Section of AOAC Meeting, Atlanta, GA, Apr 19-20, 2023. **(Invited)**
3. R.P. Ramasamy, 'Smart materials devices and systems for interface with plants and microorganisms', 2019 Meeting of the Materials Research Society, Boston MA, Dec 1-6, 2019. **(Invited)**
4. B. Suganthan, C-H. Wu, D-K. Haja, M.W.W. Adams and R.P. Ramasamy, 'Exoelectrogenicity of genetically engineered hyperthermophilies', 236th Meeting of the ECS, Atlanta GA, Oct-13-17, 2019. **(Invited)**
5. R.P. Ramasamy, 'Transdisciplinary approaches to electrochemical energy and sensing technologies', 12th International Symposium on Advances in Electrochemical Science and Technology (iSAEST-12), Chennai, India, Jan 7-10, 2019. **(Invited, Keynote)**
6. Non-covalent functionalization of carbon nanomaterials for enzyme electrochemistry', R.P. Ramasamy, 233st Meeting of the ECS, Seattle WA, May 13-17, 2018. **(Invited)**
7. 'Electrochemical sensors for the rapid detection of bacterial pathogens', R.P. Ramasamy, 32nd Annual Meeting of the AOAC International, Atlanta GA, Apr 16-19, 2018. **(Invited)**
8. 'Transdisciplinary Solutions to Societal Grand Challenges', R.P. Ramasamy, STEM Beyond the Classroom: The Dubai STEM Conference, Dubai, Apr 1-5, 2018. **(Keynote)**
9. 'Electrochemical sensors for plant volatile detection', R.P. Ramasamy, PittCon 2018, Orlando FL, Feb 26 – Mar 1, 2018. **(Invited)**
10. 'Electrochemical sensors for plant volatile detection', R.P. Ramasamy, Annual Congress on Mycology and Fungal Infections, Atlanta GA, Nov 16-17, 2017. **(Keynote)**
11. 'On the non-covalent functionalization of carbon nanostructures for biomolecule immobilization', R.P. Ramasamy, 231st Meeting of the ECS, New Orleans LA, May 28 – June 2, 2017. **(Invited)**
12. 'Electrochemical biosensors for food and agricultural applications', R.P. Ramasamy, PRiME Meeting of the Electrochemical Society, Honolulu HI, Oct 2-7, 2016. **(Invited)**

13. 'Understanding Extracellular Electron Transport in Electrochemically Active Microorganisms', R.P. Ramasamy, 61st Annual Meeting of the International Society of Electrochemistry, The Hague, Netherlands, Aug 21-26, 2016. **(Invited)**
14. 'Electrochemical biosensors for agricultural and food applications – challenges and opportunities for commercial biosensors', R.P. Ramasamy. 2015 Annual Meeting of the IFT, Jul 11-14, 2015. **(Invited)**

(b) Invited Seminars and Lectures at Other Educational and Research Institutions

15. 'Breaking Silos, Building Synergies', University of Nevada Reno, April 10, 2025.
16. 'Modest Steps, Mighty Outcomes', North Dakota State University, March 31, 2025
17. 'Small Scale, Big Impact', University of NC Greensboro & NC A&T State University, March 26, 2025.
18. 'Elevate Engineering', University of Massachusetts Dartmouth, March 3, 2025.
19. 'Electrochemical Engineering and Nanotechnology', Vellore Institute of Technology, India, Nov 15, 2024.
20. 'Towards Point of Service Diagnostic Methods', Central Food Tech Research Institute, India, Jan 21, 2024.
21. 'A vision for engineering', University of Mississippi, Feb 20, 2023.
22. 'Engineering for everyone', Illinois State University, Dec 2, 2023.
23. 'A post-pandemic vision for engineering', University of Dayton, Feb 14, 2022.
24. 'Towards point of service rapid diagnostic methods', Florida International University, Nov 15, 2021.
25. 'Electrochemical engineering at the interface', Georgia Institute of Technology, Nov 8, 2021.
26. 'Transdisciplinary approaches to electrochemical engineering', Robins Airforce Base, Aug 27, 2019.
27. 'Transdisciplinary approaches to electrochemical energy', Engineering, Univ. of Georgia, Feb 15, 2019.
28. 'Where is Chemical Engineering headed?', Indian Institute of Chem. Engineers, India, Dec 7, 2017.
29. 'Transdisciplinary approaches to electrochemical engineering', IISST, Trivandrum, India, Dec 7, 2017.
30. 'Transdisciplinary approaches to electrochemical energy and sensing', Univ. of Arizona, Nov 28, 2017.
31. 'Functional biointerfaces for electrochemical sensing applications', Univ. of Arizona, Oct 12, 2017.
32. 'Electrochemical detection technologies for food safety', Center for Food Safety, Griffin, May 2, 2017.
33. 'Non-traditional applications of electrochemical engineering', Univ. of Alabama, Mar 8, 2017.
34. 'Non-traditional approach to electrochemical engineering', Clarkson University, Feb 26, 2017.
35. 'Electrochemical Engineering', Central Electrochemical Research Institute, India, July 6, 2016.
36. 'Electrochemical Engineering', Dept. of Materials Science, IISc-Bengaluru, India, Jun 30, 2016.
37. 'Electrochemical Engineering', Dept. of Chem. Eng., Anna University, India, Jun 28, 2016.
38. 'Electrochemical Engineering', Dept. of Chem. Eng., IIT-Madras, India, Jun 27, 2016.
39. 'Electrochemical detection technologies for food safety', Center for Food Safety, Griffin, Mar 14, 2016.
40. 'Bio-electrochemical energy harvesting technologies', Medtronic Inc., May 27, 2015.
41. 'Non-traditional approaches for energy conversion', Dept. Mech. Eng., FL State Univ., Apr 29, 2015.
42. 'Overview of NEL at UGA', Toyota Technical Center, April 22, 2015.
43. 'Non-traditional electrochemical engineering', Dept. of Chem. Eng., Univ. of South FL, Mar 11, 2015.
44. 'Bio-electrocatalysis for energy and sensing', Dept. of Chemistry, Clemson University, Sep 18 2014.
45. 'Manipulating charge transfer in bio-electrochemical systems', Dept. of Chemistry, UGA, May 2012.
46. 'Enzyme bionanocomposites for energy & sensors', Dept. of Food Science & Tech., UGA, Mar 2012.
47. 'Nanocomposite enzyme catalysts for fuel cells and sensors', Univ. of TN, Knoxville, Nov 2011.
48. 'Exploiting biological electron transfer for energy applications', Oak Ridge National Lab, Dec 2010.
49. 'The science of electrochemistry – two centuries later', College of Engineering, UGA, Oct 2010.
50. 'Present challenges in electrochemical power sources', NanoSEC, UGA, Aug 2010.
51. 'Exploiting biological electron transfer', Chemical Eng., Univ. of New Hampshire, Mar 2010.
52. 'Manipulating electron transport in biological systems ', University of Georgia, Feb 2010.
53. 'Wiring bacterial cells and enzymes', Mechanical Eng., Univ. of Texas at El Paso, Mar 2009.
54. 'Alternate materials for lithium ion batteries', Rayovac Inc., June 2008.
55. 'Electrochemical behavior of the biofilm in microbial fuel cells', CFD Research Corp., May 2008.

PATENTS, COPYRIGHTS, INTELLECTURAL PROPERTIES (Lead inventor underlined)

(a) Patents (12)

1. 'A novel method for Hepatitis A diagnosis', R.P. Ramasamy, D. Kaur, M. Esseili, patent application being prepared for filing, update 11/25/2024.
2. 'Pre-seizure detection device incorporating electronic nose technology', A. Galanti, M. Haidekker, R.P. Ramasamy, U.S. patent filed on 6/25/2024, Serial No. 18/752,890, UGARF Case # 2023-124.
3. 'Bacteriophage-based electrochemical bacterial sensors, systems and methods', R.P. Ramasamy and Y. Zhou, US Patent # 11,686,729, **issued** on 27th July, 2023.
4. 'Electrochemical Sensors and Methods for Using Electrochemical Sensors to Detect Plant Pathogen Infection' (Continuation), R.P. Ramasamy and Y. Fang, US Patent # 11,274,329 B2, **issued** on 15th Mar, 2022.
5. 'Engineered photosynthetic organisms, photosynthetic electrodes including the engineered photosynthetic organisms, photosynthetic electrochemical cells and photosynthetic fuel cells' (Divisional), R.P. Ramasamy and N. Sekar, US Patent # 11,139,501 B2, **issued** on 5th October, 2021.
6. 'Biodegradable implants with anticorrosive coatings containing silk fibroin', R.P. Ramasamy and H. Asadi, U.S. Provisional Patent Application, Serial # 63/194707, UGARF # 2021-13601, filed on 28th May 2021.
7. 'Biodegradable implants with anticorrosive coatings', R.P. Ramasamy and H. Asadi, U.S. Patent Application, Serial # 63/139890, UGARF # 2021-04801, filed on 21st January 2021.
8. 'Engineered photosynthetic organisms, photosynthetic electrodes including the engineered photosynthetic organisms, photosynthetic electrochemical cells and photosynthetic fuel cells', R.P. Ramasamy and N. Sekar, US Patent # 10,741,863 B2, **issued** on 11th August 2020.
9. 'Electrochemical sensors and methods for using electrochemical sensors to detect plant pathogen infection', R.P. Ramasamy and Y. Fang, US Patent # 10,526,633, **issued** on 7th January 2020.
10. 'Photosynthetic electrochemical cells'. R.P. Ramasamy, US Patent # 10,056,659, **awarded** on 21st August 2018.
11. 'Enzyme–metal oxide nanoparticles, methods of making and methods of use', R.P. Ramasamy, U.S. patent filed on 3/19/2014, Serial No. 61/955,245.
12. 'Biofuel cell electrocatalysts using enzyme-carbon nanotube adducts'. P. Atanassov, D. Ivnitski, R.P. Ramasamy, H.R. Luckarift, G.R. Johnson and C. Lau, U.S. Patent # 8,642,308, **awarded** on Feb 10, 2014.

(b) Invention Disclosures (14)

13. 'A novel method for detecting glycosylated antibodies for therapeutic applications', R.P. Ramasamy, M. Boren and B. Suganthan, filed 12/3/2025, UGARF Case # D2026-0057.
14. 'A novel method for Hepatitis A diagnosis', R.P. Ramasamy, D. Kaur, M. Esseili, filed 10/1/2024, UGARF Case # D2025-0023.
15. 'A method to detect triple negative breast cancer biomaker', R.P. Ramasamy, A.T. Hansen, S.N. Nagdeve, B. Suganthan, filed 5/6/2024, UGARF Case # 2024-100.
16. 'Functionalized CNT-FET for pre-seizure detection', M. Haidekkar, R.P. Ramasamy and A. Galanti, filed 04/07/2023, UGARF Case # 2023-124.
17. 'Cellulose nanocrystal reinforced silk fibroin coating for enhanced corrosion protection and biocompatibility of Mg-based alloys for orthopedic implant applications', R.P. Ramasamy and H. Asadi, filed 05/12/2021, UGARF Case # 2021-136.
18. 'A multifunctional composite polymeric coating that provide anti-corosion and anti-microbial properties for implantable metals and alloys', R.P. Ramasamy and H. Asadi, filed 10/20/2020, UGARF Case # 2021-048.
19. 'Simultaneous enrichment and detection of bacterial cells', R. P. Ramasamy and Y. Zhou, 04/01/2016, UGARF Case # 2016-165.
20. Genetic engineering of cyanobacteria for direct electron transport', R.P. Ramasamy and N. Sekar, filed 05/2014. UGARF Case # 2333.
21. 'Electrochemical sensors for detection of pathogen infections in crops and agricultural produce', R.P. Ramasamy, filed 05/2014. UGARF Case # 2221.

22. 'Enzyme–metal oxide nanoconjugates as catalysts for fuel cells and biosensors', R.P. Ramasamy, filed 02/2014. UGARF Case # 2179.
23. 'Cationic polymer aided protein orientation and immobilization for electrochemical applications', R.P. Ramasamy and Y. Umasankar, filed 02/2014. UGARF Case # 2169.
24. 'A novel two-step immobilization procedure for biomolecule stabilization and activity retention, R.P. Ramasamy, filed 03/2013. UGARF Case # 2038.
25. 'Harvesting energy from cholesterol for electricity generation in fuel cells', R.P. Ramasamy, filed 07/2012. UGARF Case # 1953.
26. 'Photosynthetic electrochemical cell using natural plant pigments for direct conversion light into electricity', R.P. Ramasamy, filed 06/2012. UGARF Case # 1940.

SCHOLARLY PUBLICATIONS

ORCID: https://orcid.org/0000-0002-5004-1754

(a) Book and Book Chapters

1. 'Proton exchange membrane fuel cell membrane electrode assemblies' Second Edition, R.P. Ramasamy, Encyclopedia of Electrochemical Power Sources, Vol 2, Chapter 227, 787-805, Elsevier Scientific, UK, (2024).
2. 'Manipulation of biological electron transfer mechanisms for electrochemical applications', R.P. Ramasamy, *Electron Transfer Mechanisms in Chemical and Biological Processes*, submitted (2020).
3. 'Scanning electrochemical microscopy for biological fuel cell characterization', R.P. Ramasamy, Enzymatic Fuel Cells: From Fundamentals to Applications, Chapter 14, 273-303, John Wiley & Sons, (2014).
4. 'PEMFC membrane electrode assemblies', R.P. Ramasamy, Encyclopedia of Electrochemical Power Sources, Vol 2, Chapter 227, 787-805, Elsevier Scientific, UK, (2009).

(b) Refereed Journal Publications

5. A. Galanti, D. Bearden, C. Rao, S. Perry, J. Wheless, R. P. Ramasamy and M. Haidekker, 'Advancements in seizure prediction – a review', Epilepsia, submitted, **(2026).**
6. S. Sharma, Y. Absalan, A. Mandal, R. Ramasamy, B. Suganthan and Y. Khalifa, 'Efficient photocatalytic degradation of textile dyes using four nuclear oxide nanocrystals of strontium doped under low-intensity LED light', J. Environmental Chemical Engineering, submitted, **(2025)**.
7. S. Venkatakrishnan and R.P. Ramasamy, 'Effect of fast-charging and cycling window on Li-ion battery performance and aging', J. Electrochemical Society, 172, 5, 050529 (**2025**).
8. S. Nagdeve and R.P. Ramasamy, 'Perspectives on the application of biosensors for early detection of oral cancer', Sensors, 25, 5, 1459 (**2025**).
9. L. Hansen and R.P. Ramasamy, 'Prospective methods and tools for early diagnosis of triple negative breast cancer', *submitted*, Sensors, (**2025**).
10. S. Nagdeve, B. Suganthan and R.P. Ramasamy, 'An electrochemical biosensor for detection of micro-RNA 31 as a potential oral cancer biomarker', J. Biological Engineering, 19, 1, 24 (**2025**).
11. D. Kaur, M.A. Esseili and R.P. Ramasamy, 'A cell-based electrochemical the detection of infectious Hepatitis A virus', Biosensors, 14, 12, 576 (**2024**). DOI: 10.3390/bios14120576.
12. L. Hansen, S.N. Nagdeve, B. Suganthan and R.P. Ramasamy, 'An electrochemical nucleic acid biosensor for triple negative breast cancer biomarker detection', Sensors, 24, 17, 5747 (**2024**). **(Appeared on Cover Page).** DOI: 10.3390/s24175747.
13. A. Baber, B. Suganthan and R.P. Ramasamy, 'Current advances in Hepatitis C diagnostics', *accepted*, J. Biological Engineering, 18, 1, 25 (**2024**). DOI: 10.1186/s13036-024-00443-2.
14. B. Suganthan, A. Rogers, C.S. Crippen, H. Asadi, O. Zolti, C.M. Szymanski and R.P. Ramasamy, 'A bacteriophage protein-based impedimetric electrochemical biosensor for detection of *Campylobacter jejuni*', Biosensors, 14, 8, 402 (**2024**).
15. O. Zolti, B. Suganthan, S. Nagdeve, R. Maynard, J. Locklin and R.P. Ramasamy, 'Investigation of the efficacy of *Listeria monocytogenes* biosensor using chicken broth samples', Sensors, 24, 8, 2617 (**2024**).

16. O. Zolti, B. Suganthan and R.P. Ramasamy, 'Lab on a chip electrochemical biosensors for food pathogen detection – a review of common standards and recent progress', Biosensors, 13, 2, 215, (2023). (Invited)
17. O. Zolti, B. Suganthan, R. Maynard, H. Asadi, J. Locklin, and R.P. Ramasamy, 'Electrochemical biosensor for rapid detection of *Listeria monocytogenes'*, J. Electrochemical Society, 169, p67510, (2022).
18. Y. Wang, P. Tran, B. Dzikovski, P. Wei, A. Rains, H. Asadi, R. Ramasamy, H. Schaefer and G. Robinson, 'A cationic magnesium-based dithiolene radical', Organometallics, 41, 5, 527-531, (2022).
19. H. Asadi*, S. Ghalei, H. Handa and R.P. Ramasamy, Cellulose nanocrystal reinforced silk fibroin coating for enhance corrosion protection and biocompatibility of Mg-based alloys for orthopedic implant applications, Progress in Organic Coatings, 161, 27, 106525, (2021).
20. H. Asadi*, B. Suganthan, S. Ghalei, H. Handa and R.P. Ramasamy, A multifunctional polymeric coating incorporating lawsone with corrosion resistance and antibacterial activity for biomedical Mg alloys, Progress in Organic Coatings, 153, 106151, (2021).
21. D. Patel*, Y. Zhou and R.P. Ramasamy, A bacteriophage-based electrochemical biosensors for detection of methicillin-resistant *Staphylococcus aureus*, J. Electrochemical Society, 168, p57523, (2021).
22. H. Asadi and R.P. Ramasamy, Graphene based electrochemical biosensors for impedimetric detection of miRNA as potential cancer biomarkers, J. Electrochemical Society, 167, 16, p167523, (2020).
23. Y. Fang, B. Suganthan and R.P. Ramasamy, 'Electrochemical characterization of aromatic corrosion inhibitors from plant extracts', J. Electroanalytical Chemistry, 840, 74-83, (2019).
24. J. Manuel, T. Salguero and R.P. Ramasamy, 'Synthesis and characterization of polyaniline nanofibers as cathode active material for sodium ion battery', J. Applied Electrochemistry, 49, 5, 529-537, (2019).
25. Y. Zhou, Y. Fang and R.P. Ramasamy, 'Non-covalent functionalization of carbon nanotubes for electrochemical biosensor development', Sensors, 19, 2, 392, 1-29, (2019).
26. Y. Zhou and R.P. Ramasamy, 'Isolation and separation of Listeria monocytogenes using bacteriophage P100-modified magnetic particles', Colloids and Surfaces B: Biointerfaces, 175, 421-427, (2019).
27. Y. Zhou, N. Szaro, J. Atalah, G. Espina, J.M. Blamey and R.P. Ramasamy, 'Electro-kinetic study of oxygen reduction reaction catalyzed by thermophilic laccase', J. Electrochemical Society, 165, 10, H652-H657, (2018).
28. Y. Fang, Y. Zhou and R.P. Ramasamy, 'Direct detection of methyl salicylate using tri-enzyme based electrochemical sensor', J. Electrochemical Society, 165, 9, B358-B360, (2018).
29. B. Suganthan and R.P. Ramasamy, 'Photo-bioelectrochemistry of cyanobacteria lacking respiratory terminal oxidases', ECS Transactions, 85, 13, 45-52, (2018).
30. J. Manuel and R.P. Ramasamy, 'Cycling performance of sodium ion battery comprised of naphthalene based polyimide/MWCNT composite cathode and highly porous polyvinylidene fluoride separator membrane', ECS Transactions, 85, 13, 1099-1107, (2018).
31. Y. Fang and R.P. Ramasamy, 'A portable electrochemical system for plant volatile detection', ECS Transactions, 85, 13, 1359-1367, (2018).
32. A. Ghuman, Y. Zhou, Y. Liu, L. Mao and R.P. Ramasamy, 'Bacteriophage-assisted magnetic separation and electrochemical detection of pathogenic bacteria from food matrix', ECS Transactions, 85, 13, 1475-1480, (2018).
33. N. Filla, R.P. Ramasamy and X. Wang, 'Forces, energetics, and dynamics of conjugated-carbon ring tethers adhered to CNTs: A computational investigation', Phys. Chem. Chemical Physics, 20, 16, 11327-11335, (2018).
34. J. Atalah, Y. Zhou, G. Espina, J.M. Blamey and R.P. Ramasamy, 'Improved stability of multicopper oxidase-carbon nanotube conjugates using a thermophilic laccase', Catalysis Science and Tech., 2018, 8, 5, 1272-1276, (2018).
35. N. Sekar, W. Jian, Y. Zhou, Y. Fang, Y. Yan and R.P. Ramasamy, 'Role of respiratory terminal oxidases in the extra cellular electron transfer ability of cyanobacteria', Biotechnology and Bioengineering, 115, 5, 1361-1366, (2018).

36. N. Sekar, C-H. Wu, M.W.W. Adams and R.P. Ramasamy, 'Electricity generation by Pyrococcus furiosus in microbial fuel cell operated at 90 °C', Biotechnology and Bioengineering, 114, 7, 1419-1427, (2017).
37. Y. Zhou, A. Marar, P. Kner and R.P. Ramasamy, 'Charge-directed immobilization of bacteriophage on nano structured electrode for whole cell electrochemical biosensors', ACS Analytical Chem., 89, 11, 5734-5741, (2017).
38. N. Sekar, C-H. Wu, M.W.W. Adams and R.P. Ramasamy, 'Exploring extracellular electron transfer in hyperthermophiles for electrochemical energy conversion', ECS Transactions, 72, 30, 1-7, (2016).
39. Y. Fang, H. Bullock, N. Sekar, W.B. Whitman and R.P. Ramasamy, 'Detection of methyl salicylate using bi-enzyme electrochemical sensor consisting salicylate hydroxylase and tyrosinase', Biosensors and Bioelectronics, 85, 603-610, (2016).
40. Y. Fang and R.P. Ramasamy, 'Detection of p-ethyl phenol, a major plant volatile organic compound, by tyrosinase-based electrochemical biosensor', ECS J. Solid State Science and Technology, 5, 8, M3054-M3059, (2016).
41. R. Wainright and R.P. Ramasamy, 'Platinum and platinum-cobalt nanowires supported on carbon nanospheres as electrocatalysts for oxygen reduction reaction', J. Electrochemical Society, 163, 6, F533-F538, (2016).
42. Y. Fang, Y. Umasankar and R.P. Ramasamy, 'A novel bi-enzyme electrochemical biosensor for selective and sensitive determination of methyl salicylate', Biosensors and Bioelectronics, 81, 39-45, (2016).
43. N. Sekar, R. Jain, Y. Yan and R.P. Ramasamy, 'Enhanced photo-bioelectrochemical energy conversion by genetically engineered cyanobacteria', Biotechnology and Bioengineering, 113, 3, 675-679, (2016).
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80. 'Simulation of capacity loss in carbon electrode for Li-ion cells during storage', R.P. Ramasamy, J. Lee and B.N. Popov, J. Power Sources, 166, 1, 266-272, DOI: 10.1016/j.ipowsour.2006.12.086, (2007).
81. 'Discharge characteristics of silver vanadium oxide cathodes', R.P. Ramasamy, C. Feger, T. Strange and B.N. Popov, J. Applied Electrochemistry, 36, 4, 487-497, DOI: 10.1007/s108000059103x, (2006).
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(d) Manuscripts in Preparation / Under Review (4):

87. A. Ghuman and R.P. Ramasamy, 'Rapid isolation and concentration of bacterial cells in a microfluidic device', *under preparation*.
88. Y. Fang, N. Sekar and R.P. Ramasamy, 'Studying the effect of light intensity on the electrochemical performance of photo-bioanodes', *under preparation*.
89. Y. Zhou and R.P. Ramasamy, 'Simultaneous enrichment and detection of *Listeria monocytogenes* from food matrices', *under preparation*.

WORKSHOPS

(Presenting author underlined).

1. 'Electrochemical detection technologies for food and agricultural applications', R.P. Ramasamy. NSF FEW Workshop, Sustainable Food Technologies, University of Nebraska-Lincoln, Feb 22-24, 2016.

CONFERENCE PAPERS (International and National Meetings Only)

(Presenting author underlined).

1. S. Nagdeve, B. Suganthan and R.P. Ramasamy, 'Non-invasive detection of oral cancer biomarker using an electrochemical biosensor', 248th Meeting of the Electrochemical Society, Chicago, Oct 12-16, 2025.

2. S. Nagdeve, B. Suganthan and R.P. Ramasamy, 'Development of a sensitive and selective electrochemical biosensor for potential oral cancer biomarker detection', 248th Meeting of the Electrochemical Society, Chicago, Oct 12-16, 2025.
3. A. Bhadauria, D. Kaur, M.A. Esseili and R.P. Ramasamy, 'An optimized approach for isolation of *Listeria monocytogenes* from artificially contaminated complex food matrices for electrochemical biosensor applications', 248th Meeting of the Electrochemical Society, Chicago, Oct 12-16, 2025.
4. A. Bhadauria, D. Kaur, M.A. Esseili and R.P. Ramasamy, 'Electrochemical biosensor for detection of *Listeria monocytogenes* in food matrices', 248th Meeting of the Electrochemical Society, Chicago, Oct 12-16, 2025.
5. D. Kaur, M.A. Esseili and R.P. Ramasamy, 'A label-free biosensing platform for detection of foodborne Hepatitis A virus in berries', 248th Meeting of the Electrochemical Society, Chicago, Oct 12-16, 2025.
6. S. Venkatakrishnan, and R.P. Ramasamy, 'State-of-charge cycling window dependence of lithium-ion battery degradation under real world BEV fast charging', 248th Meeting of the Electrochemical Society, Chicago, Oct 12-16, 2025.
7. J. Dunlap, R.P. Ramasamy and J. Morelock, 'Understanding Students' Motivation-Related Experiences in Different Learning Environments of Summer Engineering Courses', Frontiers in Education 2024, Washington D.C. Oct 15, 2024.
8. S. Nagdeve, B. Suganthan and R.P. Ramasamy, 'A novel electrochemical biosensor for oral cancer biomarker detection', 2024 Electrochemical Society PRiME Meeting, Honolulu, Hawaii, Oct 6-11, 2024.
9. D. Kaur, and R.P. Ramasamy, 'Development of rapid diagnostic platform for detection of Hepatitis A virus', 2024 Electrochemical Society PRiME Meeting, Honolulu, Hawaii, Oct 6-11, 2024.
10. S. Venkatakrishnan, and R.P. Ramasamy, 'Effect of fast charging and cycling window on lithium-ion battery performance and aging', 2024 Electrochemical Society PRiME Meeting, Honolulu, Hawaii, Oct 6-11, 2024.
11. S. Nagdeve, B. Suganthan and R.P. Ramasamy, 'A miRNA-based electrochemical biosensor for potential oral cancer biomarker detection', 2024 Annual Meeting of the IBE, Atlanta GA, Sep 14-15, 2024.
12. L. Hansen, S. Nagdeve, B. Suganthan and R.P. Ramasamy, 'A nucleic acid biosensor for breast cancer biomarker detection', 2024 Annual Meeting of the IBE, Atlanta GA, Sep 14-15, 2024.
13. D. Kaur, M. Esseili and R.P. Ramasamy, 'A cell-based electrochemical biosensor for the detection of Hepatitis A virus', 2024 Annual Meeting of the IBE, Atlanta GA, Sep 14-15, 2024.
14. B. Suganthan, A. Rogers, C.S. Clippen, C.M. Szymanski and R.P. Ramasamy, 'Phage-protein based biosensor to detect *Campylobacter jejuni*', 2024 Annual Meeting of the IBE, Atlanta GA, Sep 14-15, 2024.
15. B. Suganthan, D. Kaur, O. Zolti, M. Esseili and R.P. Ramasamy, 'Electrochemical biosensors for food pathogen detection', 2024 Conference of Food Engineering (CoFE 24), Seattle WA, Aug 25-28, 2024.
16. H. Asadi, A. Duncan, and R.P. Ramasamy, 'Anti-corrosive and anti-bacterial polymeric coatings consisting of PCL and lawsone', 242nd Meeting of the ECS, Atlanta GA, Oct-9-13, 2022.
17. A. Duncan, B. Suganthan, H. Asadi, O. Zolti and R.P. Ramasamy, 'Evaluation of microbiologically induced corrosion in the presence of *Streptococcus mutans*', 242nd Meeting of the ECS, Atlanta GA, Oct-9-13, 2022.
18. H. Asadi, A. Duncan, and R.P. Ramasamy, 'Silk cellulose nanocrystal composite coatings for enhanced corrosion protection and cytocompatibility', 242nd Meeting of the ECS, Atlanta GA, Oct-9-13, 2022.
19. S. Nagadeve, O. Zolti, A. Ghuman, and R.P. Ramasamy, 'Towards lab-on-a-chip sensor for bacterial cell detection', 242nd Meeting of the ECS, Atlanta GA, Oct-9-13, 2022.
20. O. Zolti, Y. Fang and R.P. Ramasamy, 'A tri-enzyme electrochemical biosensor for methyl salicylate detection in gaseous form', 2021 Annual Meeting of the IBE, Athens GA, Apr 9-10, 2021.
21. O. Zolti and R.P. Ramasamy, 'Filtration, selective isolation and concentration of *Listeria monocytogenes* from food samples using a microfluidic device', 2021 Annual Meeting of the IBE, Athens GA, Apr 9-10, 2021.
22. H. Asadi and R.P. Ramasamy, 'Electrochemical biosensors for impedimetric detection of miRNA as potential cancer biomarker', 2021 Annual Meeting of the IBE, Athens GA, Apr 9-10, 2021.
23. B. Suganthan, Y. Zhou, D. Patel, C.S. Crippen, C. Szymanski and R.P. Ramasamy, 'Phage and phage-protein based biosensors for detection of food borne pathogens', 2021 Annual Meeting of the IBE, Athens GA, Apr 9-10, 2021.

24. B. Suganthan, N. Sekar and R.P. Ramasamy, 'Light to electricity conversion using genetically modified cyanobacteria as photocatalyst', 2021 Annual Meeting of the IBE, Athens GA, Apr 9-10, 2021.
25. B. Suganthan and R.P. Ramasamy, 'Electrochemical detection of food borne pathogens for food safety applications', Center for Food Safety Annual Meeting, Atlanta, GA, March, 2020.
26. R.P. Ramasamy, 'Smart materials devices and systems for interface with plants and microorganisms', 2019 Meeting of the Materials Research Society, Boston MA, Dec 1-6, 2019. **(Invited)**
27. A. Ghuman, Y. Zhou, Y. Liu, L. Moo and R.P. Ramasamy, 'Selective isolation and concentration of foodborne pathogens in a microfluidic device', 236th Meeting of the ECS, Atlanta GA, Oct-13-17, 2019.
28. B. Suganthan, C-H. Wu, D-K. Haja, M.W.W. Adams and R.P. Ramasamy, 'Exoelectrogenicity of genetically engineered hyperthermophilies', 236th Meeting of the ECS, Atlanta GA, Oct-13-17, 2019.
29. D. Patel, Y. Zhou and R.P. Ramasamy, 'Biosensor for detection of methicillin-resistant staphylococcus aureus', 236th Meeting of the ECS, Atlanta GA, Oct-13-17, 2019.
30. H. Asadi and R.P. Ramasamy, 'Electrochemical detection of micro-RNAs for potential cancer biomarker', 236th Meeting of the ECS, Atlanta GA, Oct-13-17, 2019.
31. O. Zolti and R.P. Ramasamy, 'A nanosensor array for methyl salicylate detection in gaseous form', 236th Meeting of the ECS, Atlanta GA, Oct-13-17, 2019.
32. H. Asadi and R.P. Ramasamy, 'A carbon nanotube based impedimetric biosensor for detection of micro-RNA', 235th Meeting of the ECS, Dallas TX, May 26-30, 2019.
33. D. Patel, Y. Zhou and R.P. Ramasamy, 'A novel biosensor for methicillin-resistant Staphylococcus aureus', 2019 Annual Meeting of the IBE, St. Louis MO, Apr 4-7, 2019.
34. B. Suganthan, C-H. Wu, D.K. Haja, M.W. Adams and R.P. Ramasamy, 'Electricity generation by genetically engineered hyperthermophiles', 2019 Annual Meeting of the IBE, St. Louis MO, Apr 4-7, 2019.
35. A. Ghuman, Y. Zhou, Y. Liu, L. Mao and R.P. Ramasamy, 'Selective isolation of Listeria monocytogenes in a microfluidic device', 2019 Annual Meeting of the IBE, St. Louis MO, Apr 4-7, 2019.
36. Y. Fang and R.P. Ramasamy, 'Detection of plant disease chemical markers using a biosensor device', 2019 Annual Meeting of the IBE, St. Louis MO, Apr 4-7, 2019.
37. R.P. Ramasamy, 'Transdisciplinary approaches to electrochemical energy and sensing technologies', 12th International Symposium on Advances in Electrochemical Science and Technology (iSAEST-12), Chennai, India, Jan 7-10, 2019. **(Invited, Keynote)**
38. R.P. Ramasamy, 'Non-covalent functionalization of carbon nanomaterials for enzyme electrochemistry', 233st Meeting of the ECS, Seattle WA, May 13-17, 2018. **(Invited)**
39. A. Ghuman, Y. Zhou and R.P. Ramasamy, 'Bacteriophage-assisted magnetic separation and electrochemical detection of pathogenic bacteria from food matrix', 233st Meeting of the ECS, Seattle WA, May 13-17, 2018.
40. B. Suganthan, N. Sekar and R.P. Ramasamy, 'Photo-bioelectrochemistry of cyanobacteria lacking respiratory terminal oxidases', 233st Meeting of the ECS, Seattle WA, May 13-17, 2018.
41. N. Sekar and R.P. Ramasamy, 'Understanding the mechanisms of photosynthetic electron transport for energy conversion applications', 233st Meeting of the ECS, Seattle WA, May 13-17, 2018.
42. Y. Fang and R.P. Ramasamy, 'A portable system for plant volatile detection', 233st Meeting of the ECS, Seattle WA, May 13-17, 2018.
43. J. Manuel and R.P. Ramasamy, 'Cycling performance of sodium ion battery comprised of naphthalene-based polyimide/MWCNT composite cathode and highly porous polyvinylidene fluoride separator membrane', 233st Meeting of the ECS, Seattle WA, May 13-17, 2018.
44. R.P. Ramasamy, 'Electrochemical sensors for the rapid detection of bacterial pathogens', 32nd Annual Meeting of the AOAC International, Atlanta GA, Apr 16-19, 2018. **(Invited)**
45. B. Suganthan, N. Sekar and R.P. Ramasamy, 'Enhancing photocurrent generating ability of *Synechococcus elongatus* PCC7942 lacking respiratory terminal oxidases', 2018 Annual Meeting of the IBE, Norfolk VA, Apr 5-7, 2018.

46. B. Suganthan, C.H. Wu, M.W.W. Adams and R.P. Ramasamy, 'Exploring extracellular electron transfer in *Pyrococcus furiosus* by manipulating the cytoplasmic hydrogenase to increase the electrogenic activity', 2018 Annual Meeting of the IBE, Norfolk VA, Apr 5-7, 2018.
47. Y. Fang and R.P. Ramasamy, 'Detection of methyl salicylate using esterase, salicylate hydroxylase and tyrosinase-based tri-enzymatic biosensor', 2018 Annual Meeting of the IBE, Norfolk VA, Apr 5-7, 2018.
48. A. Ghuman, Y. Zhou, Y. Liu, L. Mao and R.P. Ramasamy, 'Magnetic separation of food borne pathogens in a microfluidic device', 2018 Annual Meeting of the IBE, Norfolk VA, Apr 5-7, 2018.
49. Y. Zhou and R.P. Ramasamy, 'Rapid detection of food borne pathogens using bacteriophage as recognition element', 25rd Annual Meeting of the Center for Food Safety, Atlanta GA, Mar 13-14, 2018.
50. R.P. Ramasamy, 'Electrochemical sensors for plant volatile detection', PittCon 2018, Orlando FL, Feb 26 – Mar 1, 2018. (Invited)
51. R.P. Ramasamy, 'Electrochemical sensors for plant volatile detection', Annual Congress on Mycology and Fungal Infections, Atlanta GA, Nov 16-17, 2017. (Keynote)
52. R.P. Ramasamy, 'On the non-covalent functionalization of carbon nanostructures for biomolecule immobilization', 231st Meeting of the ECS, New Orleans LA, May 28 – June 2, 2017. (Invited)
53. R.P. Ramasamy and N. Sekar, 'Understanding electron transport in photosynthetic membranes for electrochemical energy conversion', 231st Meeting of the ECS, New Orleans LA, May 28 – June 2, 2017.
54. R.P. Ramasamy and Y. Fang, 'Electrochemical biosensors using multi-enzyme cascade reactions', 231st Meeting of the ECS, New Orleans LA, May 28 – June 2, 2017.
55. Y. Zhou and R.P. Ramasamy, 'Charge-directed immobilization of bacteriophage on nanostructured electrode for whole cell electrochemical biosensors', 253rd ACS National Meeting, San Francisco CA, Apr 5, 2017.
56. Y. Zhou and R.P. Ramasamy, 'Electrochemical biosensors for detection of food borne pathogens', 24rd Annual Meeting of the Center for Food Safety, Atlanta GA, Mar 6-7, 2017.
57. R.P. Ramasamy, 'Electrochemical biosensors for food and agricultural applications', PRiME Meeting of the Electrochemical Society, Honolulu HI, Oct 2-7, 2016. (Invited)
58. R.P. Ramasamy, 'Understanding Extracellular Electron Transport in Electrochemically Active Microorganisms', 61st Annual Meeting of the International Society of Electrochemistry, The Hague, Netherlands, Aug 21-26, 2016. (Invited)
59. Y. Fang, Y. Zhou, N. Sekar and R.P. Ramasamy, 'A molecular tethering method for linking anything biological to carbon nanotube modified electrodes', 61st Annual Meeting of the International Society of Electrochemistry, The Hague, Netherlands, Aug 21-26, 2016.
60. N. Sekar and R.P. Ramasamy, 'Investigating exoelectrogenicity of microorganisms for electricity generation in microbial fuel cell', ASM Microbe 2016, The Annual Meeting of the American Soc. of Microbiol., Jun 16-20, 2016.
61. N. Sekar, C-H. Wu, M. Adams and R.P. Ramasamy, 'Exploring extracellular electron transfer in hyperthermophiles for electrochemical energy conversion', 229st Meeting of the ECS, San Diego CA, May 29 – June 2, 2016.
62. N. Sekar and R.P. Ramasamy, 'Establishing direct electron transfer in cyanobacteria for photocurrent generation', 229st Meeting of the ECS, San Diego CA, May 29 – June 2, 2016.
63. Y. Fang and R.P. Ramasamy, 'Detection of volatile plant chemicals using novel enzymatic electrochemical biosensor', 229st Meeting of the ECS, San Diego CA, May 29 – June 2, 2016.
64. Y. Zhou and R.P. Ramasamy, 'Electrochemical biosensors for detection of food borne pathogens', 23rd Annual Meeting of the Center for Food Safety, Atlanta GA, Mar 1-2, 2016.
65. J.N. Ashby and R.P. Ramasamy, 'Enhanced detection of cholesterol using molecularly tethered Cholesterol oxidase on carbon nanotube electrodes', 228st Meeting of the ECS, Phoenix AZ, Oct 11-16, 2015.
66. N. Sekar and R.P. Ramasamy, 'Enhanced photo-bioelectrochemical energy conversion by genetically engineered cyanobacteria', 228st Meeting of the ECS, Phoenix AZ, Oct 11-16, 2015.

67. R.J. Wainright and R.P. Ramasamy, 'Lithium iron phosphate nanosheet nests as cathode material for li-ion batteries', 228st Meeting of the ECS, Phoenix AZ, Oct 11-16, 2015.
68. Y. Zhou and R.P. Ramasamy, 'Phage-based electrochemical biosensors for detection of pathogenic bacteria', 228st Meeting of the ECS, Phoenix AZ, Oct 11-16, 2015.
69. Y. Fang and R.P. Ramasamy, 'Amperometric detection of plant volatiles using metal oxide nanoparticles', 228st Meeting of the ECS, Phoenix AZ, Oct 11-16, 2015.
70. R.P. Ramasamy, 'Electrochemical biosensors for agricultural and food applications – challenges and opportunities for commercial biosensors', 2015 Annual Meeting of the IFT, Jul 11-14, 2015. (Invited)
71. Y. Zhou and R.P. Ramasamy, 'Electrochemical biosensors for detection of food borne pathogens', 2015 Gordon Research Conference on Nanoscale Science and Engineering for Agriculture and Food Systems, Bentley University, Waltham MA, Jun 7-12, 2015.
72. Y. Fang and R.P. Ramasamy, 'Plant volatile sensor: bi-enzymatic sensor for selective determination of methyl salicylate', 2015 Gordon Research Conference on Nanoscale Science and Engineering for Agriculture and Food Systems, Bentley University, Waltham MA, Jun 7-12, 2015.
73. R.P. Ramasamy, 'Genetic engineering of blue green algae for electricity and fuel production', 2015 Consortium of Plant Biotechnology Symposium, Washington D.C., Mar 1-3, 2015.
74. R.P. Ramasamy, 'Development of a disease for rapid and early detection of crop infections', 2015 Consortium of Plant Biotechnology Symposium, Washington D.C., Mar 1-3, 2015.
75. 'Enhanced catalytic activity of platinum nanowires on carbon for oxygen reduction reaction', R.J. Wainright, Y. Umasankar and R.P. Ramasamy. 225st Meeting of the ECS, Orlando FL, May 11-16, 2014.
76. 'Plant volatile sensor: enzymatic transducer for selective and sensitive determination of methyl salicylate', Y. Fang, Y. Umasankar and R.P. Ramasamy. 225st Meeting of the ECS, Orlando FL, May 11-16, 2014.
77. 'Vertically aligned carbon nanosheets as immobilization supports for enzyme bio-electrocatalysis', Y. Umasankar, D.B. Brooks, B. Brown, Z. Zhou and R.P. Ramasamy. 225st Meeting of the ECS, Orlando FL, May 11-16, 2014.
78. 'Enzyme-metal oxide composites as catalysts for enzymatic oxygen reduction reaction', Y. Zhou, Y. Umasankar and R.P. Ramasamy. 225st Meeting of the ECS, Orlando FL, May 11-16, 2014.
79. 'Photocurrent generation by immobilized Nostoc sp. via direct electron transport', N. Sekar, Y. Umasankar and R.P. Ramasamy. 225st Meeting of the ECS, Orlando FL, May 11-16, 2014.
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