CTI Charlotte Teachers Institute

Collaborative Teacher Education

CTI is an educational partnership among Charlotte-Mecklenburg Schools (CMS), Davidson College and UNC Charlotte, designed to strengthen teaching in CMS by cultivating content knowledge, creativity, leadership skills and collaboration among local public school teachers.

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SCIENCE RESEARCH EXPERIENCE:

CMS TEACHERS RECEPTION AND POSTER SESSION

Thursday, September 8, 2016
5pm to 6pm

Room 128

UNC Charlotte College of Health and Human Services

Fellows in two CTI seminars collaborated with UNC Charlotte professors and their graduate and undergraduate students on university laboratory research this summer.

We're pleased to have you with us to celebrate their work and learn about their experiences.

HOW SCIENCE IS DONE

Dr. Susan Trammell, associate professor of physics and optical science at UNC Charlotte, currently leads CTI's *How Science is Done* seminar.

Single-Pixel Hyper spectral Imaging for Detecting Damage in Porcine Liver Samples

CTI Fellows: Elizabeth Walker, language arts teacher, Randolph Middle School; Janet Raybon, science teacher, Myers Park High School; and Deb Semmler, physics teacher, East Mecklenburg High School.

Laboratory Leader: Joseph Peller, Ph.D. graduate assistant, Department of Physics and Optical Science, UNC Charlottew

Light Assisted Drying (LAD) of Small Volume Biologics

CTI Fellows: Miesha Gadsden, 3rd grade, J.H. Gunn Elementary School; Tabitha Miller, kindergarten teacher, Collinswood Language Academy; and Connie Wood, biology teacher, East Mecklenburg High School.

Laboratory Leader: Madison Young, Ph.D. graduate assistant, Department of Physics and Optical Science, UNC Charlotte

IT'S A SMALL WORLD!

Dr. Marcus Jones, associate professor of chemistry at UNC Charlotte, currently leads CTI's *It's a Small World! Exploring Science at the Tiniest Scale* seminar.

Synthesis and fabrication of gold and silver nanoparticle films for plasmon-enhanced light harvesting applications

CTI Fellows: Liz Allard, 7th grade integrated science, Cochrane Collegiate Academy; Joyce Patton, science teacher, Coulwood Middle School; Ashley Renzo, 8th grade integrated science, Northwest School of the Arts; Joanne Rowe, mathematics teacher, Northwest School of the Arts

Laboratory Leaders: Kathleen Dipple and Andrew Tobias Ph.D. graduate

GRADUATE STUDENT RESEARCH

Light Assisted Drying (LAD) of Small Volume Biologics: A Comparison of Two IR Light Sources

Madison Young, Ph.D. graduate assistant, Department of Physics and Optical Science, UNC Charlotte

Single-pixel hyper spectral imaging for real-time cancer detection: detecting damage in ex vivo porcine tissue samples

Joseph Peller, Ph. D. graduate assistant, Department of Physics and Optical Science, UNC Charlotte

Development of Nano-Materials for Efficient Solar Devices

Kathleen Dipple, Ph.D. graduate assistant, Department of Chemistry, UNC Charlotte

Using Nano-Materials to improve solar energy collection

Andrew Tobias, Ph.D. graduate assistant, Department of Chemistry, UNC Charlotte

Repeatability of Light-Assisted Drying (LAD) for Protein Stabilization

Andrew Antczak, undergraduate student, Physics and Mechanical Engineering UNC Charlotte

CHARLOTTE COMMUNITY SCHOLARS

CTI also benefited from research conducted this summer by two undergraduate student interns through the Charlotte Community Scholars program:

2016 CTI Summer Research Experience for Teachers: Connecting K-12 Teaching and the Study of Nanoscale Science

Kenia Rios, Charlotte Community Scholar and psychology student, UNC Charlotte

Product Evaluation of Charlotte Teachers Institute: Exploring Influence on Fellows Outcomes

Anthony Ellis, Charlotte Community Scholar and political science/economics student, UNC Charlotte