

UNDERGRADUATE RESEARCH OPPORTUNITIES

DEPARTMENT OF CHEMISTRY

ACADEMIC YEAR 2001/2002

PROFESSOR	RESEARCH AREAS	MINIMUM COMMITMENT (SEMESTERS)	PREREQUISITES
AUSTELL (234 Ve) taustell@email.unc.edu	Web page composition for Chemistry Resource website.	1	Personal interview. Web page in portfolio (962-9429)
BOLAND (11-11 Ve) boland@unc.edu	Atom-resolved STM studies of surface chemistry.	2	Personal interview (962-5098)
BROOKHART (A404 K) mbrookhart@unc.edu	Synthetic and mechanistic organometallic chemistry; catalysis, polymer chemistry.	2	Chem 62 or 66H, 170L and personal interview (962-0362)
CRIMMINS (C644 K) crimmins@email.unc.edu	Organic synthesis. New synthetic methods. Total synthesis of biologically active natural products.	2	Chem 61, 62, 160L and personal interview (966-5177)
DESIMONE (300 Ve) desimone@unc.edu	Kinetics and equilibria of step growth polymerization. Micellar and microemulsion phases in supercritical carbon dioxide.	2 (3 preferred)	Organic lab (962-2166)
ERIE (B830 K) derie@email.unc.edu	Probing the structure and function of E. coli RNA polymerase and its regulatory proteins. Scanning force microscopy of protein DNA complexes.	3	Personal interview (962-6370)
FORBES (17-28 K) mdef@unc.edu	Photochemistry, photoionization, and "spin" chemistry. Time-resolved EPR spectroscopy of novel biradicals.	2	Personal interview (962-1696)
GAGNE (B929 K) mgagne@email.unc.edu	Catalysis of organic reactions using inorganic metal complexes.	3	Personal interview (962-6341)
GLISH (C348 K) glish@unc.edu	Development of methods for biochemical analysis using mass spectrometry. Reaction mechanisms of gas phase organic and organometallic ions.	2	Personal interview (962-2303)
JOHNSON, J. (C548 K) jeff_johnson@unc.edu	Organic synthesis, asymmetric catalysis, new reaction methodology.	2	Personal interview (843-4936)
JOHNSON, C. (C144 K) charles_johnson@unc.edu	Dynamic NMR microscopy.	3	Chem 181, 182, or permission (966-5229)
JORGENSEN (C240 K) jj@unc.edu	Chemical separations.	2	Personal interview (966-5071)
LIN (A506 K) wlin@unc.edu	Materials, solid state supramolecular, and catalytic chemistry.	2	Personal interview (962-6320)
LORD (603 Brinkhous-Bullitt) stl@med.unc.edu	Biochemical studies of existing variant fibrinogens; construction of new cDNAs for synthesis of variant fibrinogens.	2	Personal interview
MILLER (C044 K) remiller@unc.edu	Atmospheric chemistry. Aerosol mass spectrometry. Nanocatalysis: The study of small metal particles.	2	Personal interview (962-0528)

PROFESSOR	RESEARCH AREAS	MINIMUM COMMITMENT (SEMESTERS)	PREREQUISITES
MURRAY (C342 K) rwm@email.unc.edu	Analytical chemistry and basic electrochemistry of nanoscopic metal cluster molecules and transition metal complex polymers.	2	Personal interview (962-6296)
PEDERSEN (A205 K) lee_pedersen@unc.edu	Dynamics of macromolecules, quantum chemistry.	2	Pre-requisite computer prog; Chem 181, 182 or equivalent (Phys 28) (962-1578)
PIELAK (C742 K) gary_pielak@unc.edu	Probing protein structure-function-stability relationships with molecular biology and biophysics (NMR, CD, calorimetry).	3	Personal interview (966-3671)
REDINBO (C748 K) redinbo@unc.edu	Structure, biochemistry and biology of medically important protein-DNA complexes.	2	Personal interview (843-8910)
RUBINSTEIN (18-1 Ve) mr@unc.edu	Theoretical polymer chemistry and physics.	2	Personal interview (962-3544)
SAMULSKI (18-1D Ve) et@unc.edu	Liquid crystal chemistry and physics.	2	Personal interview(962-1561)
SCHAUER (A606 K) schauer@unc.edu	Synthetic inorganic/organometallic/polymer chemistry.	2	Chem 51, 170L (962-0808)
SCHOENFISCH (A200 K) schoenfi@email.unc.edu	Characterization of materials that release nitric oxide and the electrochemical evaluation of microcontact printed self-assembled monolayers.	3	Personal interview required (843-8714)
Sheyko (18-1C Ve) sergei@email.unc.edu	See web page.	2	Personal interview (843-5270)
TEMPLETON (C448 K) joetemp@unc.edu	Synthetic organometallic chemistry.	2	Chem 51, 170L (966-4575)
THOMPSON (A700 K) nlt@unc.edu	Fluorescence microscopy; cell surface immunochemistry.	3	Personal interview (962-0328)
THORP (A400 K) holden@unc.edu	Synthesis and biochemistry of molecules that interact with DNA, RNA, and proteins.	3	Personal interview (962-0276)
WALLEN (C842 K) slw@email.unc.edu	Spectroscopic studies of supercritical fluids and biophysical studies under extreme pressure and temperature conditions.	2	Personal interview (962-2933)
WATERS (A500 K) mlwaters@email.unc.edu	Investigation of noncovalent interactions in organic and bio-organic systems.	2	Chem 62 or 66H, 170L and personal interview (843-8205)
WEEKS (C848 K) weeks@unc.edu	Function/structure of RNA and of RNA-protein complexes.	3	Personal interview (962-7486)
WOLFENDEN water@med.unc.edu	Mechanisms by which enzymes stabilize transition states in substrate transformation, and the use of this information to guide the design of enzyme inhibitors.	2	Personal interview (966-1203)