

UNLV
COLLEGE OF SCIENCES
2007 FACULTY BIBLIOGRAPHY

Compile and Edited

By

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And

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Introduction

The 2007 UNLV College of Sciences Faculty Bibliography includes more than 300 citations to scientific articles, essays, chapters, and other writings found in many of the leading national and international scholarly journals and publications. Authored by some 95 faculty and staff, this impressive body of academic work demonstrates both the breadth and depth of our scientific research, and contains state-of-the-art scholarship in the fields of chemistry, geoscience, life sciences, mathematics, and physics and astronomy. The publications are the product of countless hours of study and observation in laboratories and research facilities, challenging and often difficult field work in the deserts of southern Nevada and other locations around the globe, innumerable discussions with colleagues and students, and diligent writing and editing sessions required to produce first-rate scholarship. UNLV graduate students and undergraduate students also made significant contributions to selected works. Student engagement in scientific research is a hallmark of UNLV and these publications would be poorer in quality and fewer in number without student participation.

The bibliography includes works published by College of Sciences faculty members, post doctoral scholars, and staff in 2007, with an emphasis on peer-reviewed publications. In keeping with the growing trend in scientific scholarship, articles are often the work of multiple authors. In cases involving more than one College of Sciences author, the publication is listed under the name of each author. Science Librarian JD Kotula generously devoted this time and research skills to help compile this bibliography.

The scientific research projects that provide much of the data published in these articles and writings are supported by state, federal, and private funds. Federal funding provides critical resources necessary for scientific research, and in 2007 College of Sciences faculty received in excess of \$ 20 million in funding from such entities as the National Science Foundation (NSF), the National Institute of Health (NIH), the Departments of Energy (DOE), Defense (DOD), Agriculture (DOA), and other agencies. These funds support the creation of research facilities, the acquisition of scientific equipment, and funding for postdoctoral scholars, graduate and undergraduate students, and other activities.

The ability of UNLV faculty to compete for and acquire highly competitive federal grant funds corresponds directly to an increase in scholarly publications. In 2007 the NSF published a study, "Changing U.S. Output of Scientific Articles, 1988-2003," (<http://www.nsf.gov/statistics/nsf07320/pdf/nsf07320.pdf>). This report identified UNLV (99%) as experiencing the fourth fastest growth rate in science and engineering articles for the period 1992-2001. The contents of this bibliography indicate that scientific research at UNLV continues at an impressive pace. A review of the quantity of our scientific publications reveals a long and sustained growth in publications, beginning in the 1990s and continuing through today.

The scope of these publications includes such important topics as: alternative energy, anthrax spores, biochemistry, bacteriology, differential equations, environmental science, flora and fauna of the desert, galaxy formations, gamma-ray bursts, genomics, geochemistry, geology, high pressure physics, hydrogen fuel and storage, mammalian hibernation, marine biology, microbiology, nanoscience and nanotechnology, quasars, radiation chemistry, science education and instruction, soils science, volcanoes, and many others.

The College of Sciences publishes a number of print and electronic resources to document and promote the teaching, research, and community service activities of our faculty, students, staff, alumni, and friends. The College of Sciences website (<http://sciences.unlv.edu/>) serves as a gateway to our many activities and accomplishments, and additional information on our publications is available at: <http://sciences.unlv.edu/publications.html>.

Scientific publications are but one measure of a scholar's contributions and value to his or her profession, institution, and field(s) of study. When joined with teaching, related research efforts, and service to the institution and community these publications serve as the measure of our efforts to improve the quality of life here in southern Nevada, across our state and region, and around the globe.

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