

**THE TREATMENT OF CYANIDE INDUSTRIAL WASTEWATER
USING TiO₂ PHOTOCATALYST IN THE PRESENCE OF METAL IONS**

by

Yi-Ting Chen

Approved:

Chin-Pao Huang, Ph.D.
Professor in charge of thesis on behalf of the Advisory Committee

Approved:

Michael J. Chajes, Ph.D.
Chair of the Department of Civil and Environmental Engineering

Approved:

Eric W. Kaler, Ph.D.
Dean of the College of Engineering

Approved:

Conrado M. Gempesaw II, Ph.D.
Vice Provost for Academic and International Programs

**MODELING LARGE THREE DIMENSIONAL STRESS REVERSALS
IN CROSS-ANISOTROPIC SANDS**

by

Suresh Kumar Gutta

Approved:

Michael J. Chajes, Ph.D.
Chair of the Department of Civil and Environmental Engineering

Approved:

Eric W. Kaler, PhD.
Dean of the College of Engineering

Approved:

Conrado M. Gempesaw II, Ph.D.
Vice Provost for Academic and International Programs