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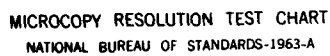
UNIVERSITY CONFERENCE ON CERAMIC SCIENCE (19TH):  
EMERGENT PROCESS METHODS. (U) NORTH CAROLINA STATE UNIV  
RALEIGH DEPT OF MATERIALS ENGINEERING. R F DAVIS ET AL.  
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A  
Final Report  
to the  
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concerning the  
Nineteenth University Conference  
on Ceramic Science:  
EMERGENT PROCESS METHODS FOR HIGH TECHNOLOGY CERAMICS  
held at  
North Carolina State University  
November 8-10, 1982

Submitted by the  
Conference Co-Chairmen  
Dr. R. F. Davis      Dr. Hayne Palmour III      Dr. R. L. Porter

Department of Materials Engineering  
North Carolina State University  
P. O. Box 7907  
Raleigh, N. C. 27695-7907

January, 1984

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## INTRODUCTION

✓ This report summarizes the University's activities in planning, organizing and conducting an international conference concerned with unconventional methods for processing of crystalline ceramics, and thereafter, in editing and arranging for commercial publication of its proceedings. The conference, nineteenth in an ongoing but "one-of-a-kind" series presented at North Carolina State University and several other universities in the nation involved in ceramic teaching and research, was held November 8-10, 1982, in the University's new Jane S. McKimmon Center for Continuing Education and Extension.

## PURPOSE

The three-day meeting entitled EMERGENT PROCESS METHODS FOR HIGH TECHNOLOGY CERAMICS, provided the first international forum organized specifically to address the fundamental science as well as the technological state-of-the-art of novel process methods which are beginning to influence present and future directions for non-traditional ceramic processing. It also brought together ceramic scientists, chemists, physicists, and several directors of research which allowed discussion of the various topics from the viewpoints of the sciences and engineering as well as economics.

## DIRECTION

The conference was organized and conducted under the direction of



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its three co-chairmen, Drs. Davis, Palmour, and Porter. They also served as editors of the Proceedings.

#### SUPPORT

In response to University generated proposals, three federal agencies and four industrial corporations or their foundations provided timely and indispensable financial support for planning and publicizing, for organizing and conducting, for meeting travel expenses for certain domestic and foreign contributors, and for editing and preparing the manuscripts for publication in the Proceedings (See Table I).

The conference was well attended, and the resultant registration fees were utilized to defray all the registrants' direct costs (conference means, local bus transportation, prepaid copies of the Proceedings, etc.) as well as a substantial share of the indirect costs of conducting the conference. All transactions with registrants, caterers, etc. were coordinated and accounted for by the University's Division of Continuing Education (See Table II).

Tables I and II provide cost breakdowns for all the expense components involved. They show the total cost of the conference to have been \$71,892.29. Of this amount, \$21,000 (29.2%) was provided by the three supporting agencies, \$20,000 (27.8%) was provided by industrial sources, \$27,212.29 (37.9%) by the registrants and \$3,680.00 (5.1%) came from Plenum Press to partially defray the cost of word processing many of the edited manuscripts, index, etc. The residual amount of \$802.71, all of which was derived from non-federal sources, reverted

to the Dean of Engineering's fund for the initiation of additional conferences.

### ATTENDANCE

More than 240 persons participated in conference activities including our own key University administrators, faculty members and students. Approximately 48.0% of those attending represented industry; 30.0% universities, and 22.0% government and nonprofit laboratories. Participants were drawn from the United States and abroad, including England (1), Japan (11), France (4), Germany (3), Sweden (2), Australia (1), Canada (1), and the Netherlands (1). (See attached registration lists.)

### ADVISORY COMMITTEE

In the opinion of the co-chairmen, the success of the conference is due in no small part to early and important inputs by a 13-member Advisory Committee of distinguished ceramic scientists, educators, and engineers, all of whom have contributed to knowledge of ceramic processing and many of whom have also had prior experience in organized major conferences of this type. Most were also present for the conference itself, taking active roles as speakers, session chairmen, etc. Members of the Advisory Committee will be individually identified in the published Proceedings, as they earlier were in the press releases, preliminary announcements, and complete conference program.

## CONFERENCE STAFF

The conference staff was made up of a number of faculty, staff and student members whose mostly behind-the-scenes efforts were critical to the environment, the ambiance, the timing, and the overall success of the conference. In the published Proceedings, the conference co-chairmen will identify these individuals and make special note of their valuable contributions.

## AUTHORS

The most important factor governing the success of such an undertaking resides in the stature and diversity (the "mix") of the authors chosen, and in the quality, appropriateness, and timeliness of their individual presentations. Both good luck in timing and theme selection and very sound advice about topics, speakers, etc., from the Advisory Committee appear to have prevailed in this instance. The 60 papers to be included in the published Proceedings were generated by a total of 122 contributing authors and coauthors. Collectively, they represent most of the major academic, industry and government research centers known to be actively involved in the science of ceramic processing. Many of them are senior scientists and educators, already internationally known for outstanding contributions in their respective fields or subfields but the co-chairmen were also pleased with the opportunities this conference made available to give significant exposure before a discriminating audience to a number of extremely promising younger authors and coauthors. All authors and coauthors

are identified in the complete conference program, and in the published Proceedings.

In an undertaking of this magnitude, some changes in papers near the time of the conference is almost inevitable. After the complete program was printed, three papers were withdrawn and four were added. Near the time of the conference, one author found that some of his data was incorrect and withdrew his paper. Two other authors were unexpectedly unable to attend. However, simultaneous with these withdrawals, four new authors having late-breaking information asked for and received slots in the Poster Session portion of the program.

Of the 63 papers finally scheduled for presentation, 60 of them will be included in the published Proceedings. Despite repeated followups by telephone and letter, two manuscripts could not be obtained in time for publication. One paper was not actively sought, as it was judged unworthy for publication.

#### PUBLICATION

The edited Proceedings of the conference will be published by Plenum Publishing Corporation, New York and London, early in 1984. Edited by the three conference co-chairmen, the 802 + xix pp. work contains 60 papers, some 340 figures, 76 tables, 1220 references, a list of contributors, and an extensive subject index. Forty-six percent of the papers include written discussion. The work will be identified as:

R. F. Davis, Hayne Palmour III, and R. L. Porter, Eds., EMERGENT



PROCESS METHODS FOR HIGH TECHNOLOGY CERAMICS Materials Science  
Research, Vol. 17, Plenum Press, New York, 1984.

#### DISTRIBUTION

Under two separate agreements, Plenum is providing the University with copies of the Proceedings to meet all conference needs. Under the publishing agreement, a total of 78 gratis copies have been furnished to the Editors (6 each) and to each principal author. Under a separate special prepublication purchase agreement with Plenum, the University's Continuing Education Division will also purchase additional copies at reduced cost. Using address labels furnished by the University, Plenum is distributing nonduplicating copies to co-authors, Advisory Committee members, Session Chairmen, and other qualified registrants. The balance will be distributed by the co-chairmen to sponsors, to university administrators, etc.

By arrangement with the editors, Plenum has also agreed to furnish complimentary copies to outstanding ceramic educators, researchers, editors, etc., around the world who were not themselves directly involved with the conference.

TABLE I

## SUMMARY OF COSTS AND SOURCES FOR PLANNING, ORGANIZING AND PUBLICIZING THE CONFERENCE, AND FOR EDITING THE PROCEEDINGS

	Trust 140101 (ERSD 609) Industrial Support	Trust 17785 U. S. Department of Energy	Trust 17795 U. S. Office of Naval Research	Trust 17786 U. S. Army Research Office	Totals
<b>Support for Conference</b>					
(a) Federal Sources					
(b) Industrial Sources					
Phillip McKenna Fdn.	15,000.00	10,000.00	5,000.00	6,000.00	21,000.00
GTE	3,000.00				
Martin Marietta	1,000.00				
TRW Fdn.	1,000.00				
(c) Other Sources					
Continuing Education	6,197.71				
Plenum Press	3,680.00 (est.)				
<b>Subtotal: Conf. Support</b>	<b>29,877.71 (est.)</b>	<b>10,000.00</b>	<b>5,000.00</b>	<b>6,000.00</b>	<b>50,877.71</b>
<b>Expenses for Conference</b>					
Staff & Student Salaries	5,467.20	1,988.90	2,084.25	766.50	10,306.85
Supplies	-0-	13.15	-0-	-0-	13.15
Postage & Telephone	109.38	713.90	200.00	-0-	1,023.28
Travel					
Local	-0-	-0-	-0-	-0-	-0-
Domestic (5 Contributors)	299.01	4,546.02	1,335.87	3,790.00	9,970.90
Foreign (6 Contributors)	9,022.82	-0-	-0-	-0-	9,022.82
Printing Costs					
Word Processing	5,889.00	-0-	-0-	-0-	5,889.00
Cost of Books to Eds. (est.)	6,000.00 (est.)	-0-	-0-	-0-	6,000.00 est.
Other	1,416.80	301.65	127.13	6.30	1,851.88
General Expense, Includ. Communic. Reserve in 140101 for Final	72.70 (est.)	114.98	-0-	52.74	240.42
Staff Fringe Benefits					
Overhead on Fed. Contracts	498.37	13.40	99.00	-0-	610.77
@30% of all items noted above					
Other Overhead Expenses	299.72	2,308.00	1,153.75	1,384.46	4,846.21
<b>Subtotal, Federal Expenses</b>					
<b>Subtotal, Industrial Expenses</b>	<b>29,075.00 (est.)</b>	<b>10,000.00</b>	<b>5,000.00</b>	<b>6,000.00</b>	<b>21,000.00</b>
<b>Support Less Expenses</b>	<b>802.71 (est.)</b>				<b>29,075.00 est.</b>
<b>Net Totals</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>	<b>-0-</b>	<b>802.71 est.</b>

TABLE II

THE NINETEENTH UNIVERSITY CONFERENCE ON  
CERAMIC SCIENCE

November 8-10, 1982

EXPENSE AND INCOME SUMMARY

## Program Expense:

## I. Program Planning:

Plantscapes, Inc.	\$ 377.62
Spectator (Newspapers)	50.00
National School & Ind. Corp.	53.70
Stone's School Supply	181.80
We Mail It	25.00
University Graphics (Ribbons)	68.54
Telephone	70.00
Transportation	421.93

## II. Printing:

Brochure, 10,000 (Piedmont)	3,939.40
Micro Carbons (Univ. Graphics)	117.49
Misc. Printing	167.12
Meal Tickets	40.00

## III. Postage:

W/envelopes	1,985.98
W/out envelopes	1,360.26

IV. Con Ed Admin. Costs	<u>2,050.00</u>	\$10,908.84
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## Direct Cost:

I. Name Tags	\$ 37.50
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II. Receipts & Reg. Cards	80.25
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III. Student Supplies	184.80
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## IV. Food and Refreshments:

Three luncheons (McKimmon Center, Baxley)	2,907.45
Refreshment Breaks	2,325.00
Social (Mission Valley)	1,211.55
Banquet (Faculty Club)	<u>4,161.90</u>
	\$10,908.45

TOTAL EXPENSES		\$21,817.29
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Total Income	\$28,015.00
Less Expenses	<u>21,817.29</u>
NET (To be returned to Engineering)	<u>\$ 6,197.71</u>

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