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FINAL REPORT
EVALUATION OF CHEMICAL AND ATMOSPHERIC SCIENCES RESEARCH
DR. JOSEPH E. EARLEY

APR - 83 - 1555

F49620-81-C-0085

GEORGETOWN UNIVERSITY
DEPARTMENT OF CHEMISTRY
WASHINGTON, D.C. 20057

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10 September 1981 - 9 September 1984

Georgetown University
Department of Chemistry

Final Technical Report
Contract F49628-81-C-0085

U.S. Air Force Office of Scientific Research
For the period September 1, 1981 to September 9, 1984

During the period covered by this report, six plenary meetings of the Chemistry Research-evaluation Panel for AFOSR have been held. The sixty-third chemistry research evaluation meeting for AFOSR was held at the U.S. Air Force Academy, Colorado on November 12 and 13, 1981; thirty-nine proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix I. The sixty-fourth chemistry research-evaluation meeting for AFOSR was held at Alexandria, Virginia, on May 13 and 14, 1982; fifty proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix II. The sixty-fifth chemistry research evaluation meeting for AFOSR was held at New Orleans, Louisiana on November 11 and 12, 1982; thirty-five proposals were considered at that meeting, and relative rankings for scientific

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Keywords: *Chemistry - (AFOSR)*

quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix III. The sixty-sixth chemistry research-evaluation meeting for AFOSR was held at Washington D.C. on May 12 and 13, 1983; forty-seven proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix IV. The sixty-seventh chemistry research-evaluation meeting was held at San Antonio, Texas on November 10 and 11, 1983; thirty-four proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report specifying that rank-order has been submitted and is appended as Appendix V. The sixty-eighth chemistry research-evaluation meeting was held at Georgetown University on May 10 and 11, 1984; forty-eight proposals were considered at that meeting, and relative rankings for scientific quality were determined. An interim technical report has been submitted and is appended as Appendix VI. During the period of this report, a total of two hundred and fifty-three chemical proposals were reviewed and ranked.

Panels of evaluators were provided for five contractors' meetings that dealt with specific portions of the ongoing AFOSR research program. These meetings were held as follows: Buffalo, New York, May 6-7, 1981; Albuquerque, New Mexico, November 9-11, 1981; Buffalo, New York, May 6-7, 1982; Air Force Academy, Colo. December 1-3, 1982; Hanscom AFB, Mass., October 26-28, 1983. Interim technical reports covering each of these meetings have

been submitted.

Procedures for evaluating atmospheric-sciences research proposals have been developed and refined. Interim Technical Reports dealing with that activity have been submitted. Overall grades are included in appendices I, II, III, IV, V, VI. In total, two hundred and fifty-three chemical and thirty-six atmospheric proposals were evaluated of which three earned the overall rating of A+, one of A/A+, thirty-five of A, five of A/A-, sixty of A-, thirty-three of A-/B+, one of A-/B, three of A/B, seventy-three of B+, eleven of B/B+, forty-seven of B, two of B-, one of B-/C, two of C+, twelve of C or R.

Panel members who served during the period of this report are:

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University Park, Pa. 16802

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Submitted by,


Joseph E. Earley
Professor and Chairman

Principal Investigator
Contract F496281-C-0085

November 1, 1984

Appendix I

Georgetown University
 INTERIM TECHNICAL REPORT
 F49628-81-C-0085

Final Ranking

63rd Chemistry Research Evaluation Meeting
 Air Force Office of Scientific Research

I	II	III
	A+/A 72 Oka	
A 45 Mess	A 79 Yates 64 Stwalley	A 79 Yates
A/A- 48 Seyferth	A/A- 54 Burnett	
A- 66 Patner and Whitmore	A- 53 Davis and Alexander	A- 83 Rinaldi
70 Abrahamson	68 Kuppermann	59 Chu(a)
81 Skell	62 Schwerzel and Epstein	62 Schwerzel and Epstein
85 Lopez		74 Davis, Matienzo, and Venables
51 Shreave		
A-/B+ 77 Baum	A-/B+ 78 Golden and Rossi	
	61 Berry	
B+ 46 Rosenthal	B+ 71 Porter 73 DePristo	B+ 85 Sung(a) 57 Mulvaney 84 Schultz
B+/B 56 Crouch		B+/B 58 Kelley and Morton
60 Carper		c { 63 Stevenson, Legg, and Rabinovitch(a)
65 Davis and Liu		80 Couchman and Scheinberg
B 47 Nandi	B 46 Crouch	B 75 Bernasek and Draper
50 To	70 Lynds and Michels	
55 Green and Paul	c { 55 Green and Paul	
	65 Davis and Liu	
	75 Bernasek and Draper	
	67 Robinson	
Not Rated: 69 Guillemingh and Dickens(b)		
(a) Tentative ranking, pending additional evaluation	(b) Rewrite Recommended	(c) Equal Ranking

Joseph E. Lantry
 Joseph E. Lantry, Principal Investigator

November 13, 1981
 U.S. Air Force Academy, Colorado

Appendix II

Georgetown University

INTERIM TECHNICAL REPORT
F49628-81-C-0085

Final Ranking

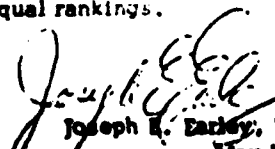
64th Chemistry Research Evaluation Meeting
Air Force Office of Scientific Research

<u>I and III</u>	<u>II</u>
A 26 Kramer	A 22 Leone 41 Wittig 17 Crim.
A/A- { 33 Fristad 44 Lemal 50 Bruckenstein	
A- { 10 Conradi 20 Trogler 12 Finklea 23 Dewar 46 Baldeschwieler *	A- 18 Houston 34 Dyke 05 Cavanagh 19 Benziger 36 Engel 15 Yarkony 14 Raff 40 Steinfeld
A-/B+ { 08 Houk 13 Newman and Scheinbeim 21 Goodenough and Dickens	A-/B+ { 01 Greene 39 Rabitz 45 Redmon 43 Dows 02 Kouri
B+ { 25 Diott 49 Weber 32 White 38 Mark 29 Taft 30 Anderman * 42 Stegeman et al. 31 Cukier 11 Raleigh 16 Dresselhaus	B+ 48 Becker 03 Herbst 37 DePristo 07 Rosenfeld
B { 09 Allen 24 Meie 27 Harrison 28 Magill 35 Coombe 47 Eiceman	

Asterisk indicates tentative ranking, pending additional review.

Brackets indicate equal rankings.

C
04 Haydock
06 McCluskey


Joseph E. Earley, Principal Investigator
May 14, 1982
Alexandria, Virginia

Appendix III

Georgetown University
 INTERIM TECHNICAL REPORT
 F49628-81-C-0085


Final Ranking

65th Chemistry Research-Evaluation Meeting
 Air Force Office of Scientific Research

<u>I and III</u>		<u>II</u>	
A+	72 Collman-Anson	A+,A	67 Levy 86 White
A	93 Katz	A	64 Dyke 98 Golde
A-	70 Bedford-Thompson	A-	60 Mayer 66 Setser 99 McGowan
A-/B+	71 Dolbier 75 Hall 97 Krigbaum-Preston	A-/B+	69 Barker 100 Pritchard e58 Tellinghausen e65 Halpern 84 Schwarz*
B+	63 Molloy 76 Mulvenay 79 Jones 96 Nicholson 95 Ring-O'Neal*	B+	56 Alfano 85 Davidovits 91 Heaven 57 Hichen 78 Lester
B/B+	77 Miller		
B	61 Harris 62 Lardner 88 Otter	B	74 Fry 90 Benard
		C	59 Yang

Asterisk * indicates tentative ranking, pending further evaluation, not ranked relative to others in the same group.

Ampersand e indicates equal evaluations (tie rankings).

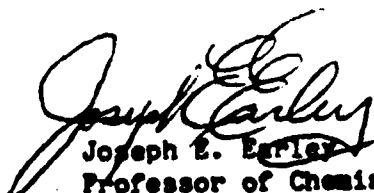

 Joseph E. Earley
 Principal Investigator
 November 12, 1982
 New Orleans, Louisiana

GEORGETOWN UNIVERSITY
DEPARTMENT OF CHEMISTRY

INTIRIM TECHNICAL REPORT FOR APOSR RESEARCH-EVALUATION

	CATEGORY I	CATEGORY II
A	38 Boudjouk 20 Matsamune 19) Turro 02) Angell	11 Stair 45 Burnett 36 Mosely 15) Dagdigian 22) Eisenthal 14) Rabitz 50 Murray *
A-	13 King 5 Hughes 42 Weitz 32 Donald 27 Grubb 16 Hansen	41 Heidner 42 Weitz 37 Wang 34 Hanson † 46 Ratner
A-/B+	25 Michl 12 Stille	
B+	39 Moriarity 31 Collins 18 Shiner 3 Hieftje 1 Geil 49 Niedenzu	44 Weiss 43 Adams 17 Campion 29 Michels 48 Benesch
B/B+	4 Marchand 9 Tuazon	26 El Batoumy
B	24 Maddou 23 Winefordner	33 Thompson 21) Lauer 30) Menzer 40) Salk 7 Lin
C	28 Aracwal	8 Su

) equal ranking
* preliminary study only approved
† additional review suggested

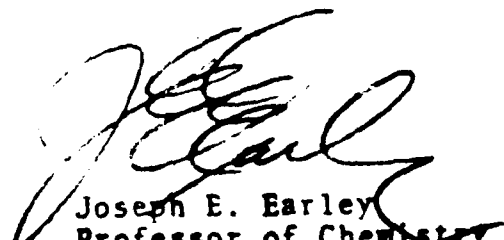

Joseph E. Earley
Professor of Chemistry
Principal Investigator
May 13, 1983

Appendix V

Georgetown University
Department of Chemistry

Revised Interim Technical Report for AFOSR Research-Evaluation

	CATEGORY I	CATEGORY II
A	75 Allcock	74) Fenn 80) Leone 87 Siebener
A-	89) Osteryoung 63) Pope	70 Julienne 86 Ross* 79 Skofronick, Safron†
A-/B+	65) Green 71) Royce	69 Bauer 68) Guberman 78) Jordon 67 Rich
A/B	81 Klein**	
B+	64 Bray 60 Suter 76 Sievers 73 Yoke 82 Jung	66 Sentman
B	59 Goldberg 85 Bradley 88 McGown 58 Farona 61) Krause 83) Lyle 77 Carper	84 Ogryzlo 59 Goldberg 85 Bradley
C	62 Brown ‡	72 Simpson



Joseph E. Earley
Professor of Chemistry
Principal Investigator
January 31, 1984

) equal ranking
no consensus
* additional review required
** assuming P-I can answer serio
questions raised by a review
‡ Category III

(Replaces preliminary report dated November 11, 1983)

Appendix VI

GEORGETOWN UNIVERSITY

DEPARTMENT OF CHEMISTRY

INTERIM TECHNICAL REPORT FOR APOSR CHEMISTRY RESEARCH-EVALUATION

CATEGORY I

A+ 36 Jonas
 A 06 Hubbard
 29 Bernstein

A- 37 Lit.
 22) Heineman
 16) Burton

B+/A-

B+ 03 Eisch
 12 Frese
 13 Klabunde
 34 Smith
 20 Johnston
 39 White *
 38 Chung
 35 Smith

B 09 Messing
 27 Paciorek
 17 Smith

C 05 Pienta

CATEGORY II

43 Field
 25 Williams
 24 Smalley
 19 Winograd *
 14 Rice *

50 Thomas
 49 Anderson *
 30 Weisshaar
 31 Eyer
 32 [Kolb]*

26 Levine
 15 Barker
 46 Saxon


04 Weiner
 51 Reeves *
 40 Wodarczyk
 10 Tatarchuk
 44 Rosenfeld
 23 McMillan

07 Kouri
 42 Pritt
 33 Lipps *
 47 Ritchie
 28 Shirts
 11 Cunningham

41 Baldeschwieler

CATEGORY III

A-/B 02 West
 B+/B 45 Auer*
 B-/C 01 Kaplan
 C 48 Hansman


 Joseph E. Barley
 Professor of Chemistry
 Principal Investigator

May 11, 1984

) equal ranking
 * additional review required