

*Memoirs of the*  
FACULTY OF ENGINEERING  
KYOTO UNIVERSITY

VOLUME XXXIX PART 2

APRIL 1977

Published by  
KYOTO UNIVERSITY  
KYOTO, JAPAN

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This memoirs is issued quarterly by the University to publish the original contributions to engineering science made or communicated by the members of the faculty. The faculty consists of following departments:

Dept. of Civil Engineering	Dept. of Nuclear Engineering
Dept. of Mechanical Engineering	Dept. of Sanitary Engineering
Dept. of Electrical Engineering	Dept. of Applied Mathematics and Physics
Dept. of Mineral Science and Technology	Dept. of Precision Mechanics
Dept. of Metallurgy	Dept. of Synthetic Chemistry
Dept. of Industrial Chemistry	Dept. of Electrical Engineering, II
Dept. of Architecture	Dept. of Metal Science and Technology
Dept. of Hydrocarbon Chemistry	Dept. of Transportation Engineering
Dept. of Chemical Engineering	Dept. of Architectural Engineering
Dept. of Polymer Chemistry	Dept. of Information Science
Dept. of Electronics	Dept. of Engineering Science
Dept. of Aeronautical Engineering	Automation Research Laboratory
	Ionosphere Research Laboratory

All communications regarding the memoirs should be addressed to the dean of the faculty.

Vol. XXXIX, Part 2

April 1977.

昭和52年7月20日 印刷

昭和52年7月25日 発行

編集兼発行者 京都大学工学部

印刷者 中西 亭  
京都市上京区下立売小川東入

印刷所 中西印刷株式会社  
京都市上京区下立売小川東入