

# Development of Controlling Technologies of Indoor Air Environment in Highly Airtight and Insulated Living Space

メタデータ	言語: jpn 出版者: 公開日: 2021-09-06 キーワード (Ja): キーワード (En): 作成者: Kanaoka, Chikao メールアドレス: 所属:
URL	<a href="https://doi.org/10.24517/00064050">https://doi.org/10.24517/00064050</a>

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 International License.



# 1999 Fiscal Year Final Research Report Summary

## Development of Controlling Technologies of Indoor Air Environment in Highly Airtight and Insulated Living Space

Research Project

### Project/Area Number

10650585

### Research Category

Grant-in-Aid for Scientific Research (C)

### Allocation Type

Single-year Grants

### Section

一般

### Research Field

Architectural environment/equipment

### Research Institution

KANAZAWA UNIVERSITY

### Principal Investigator

**KANAOKA Chikao** KANAZAWA UNIVERSITY, Natural Science and Technology, Professor, 自然科学研究科, 教授 (00019770)

### Co-Investigator(Kenkyū-buntansha)

KISIMA Takamasa KANAZAWA UNIVERSITY, Natural Science and Technology, Research assistant, 自然科学研究科, 助手 (30303259)

FURUUCHI Masami KANAZAWA UNIVERSITY, Faculty of Engineering, Associate Professor, 工学部, 助教授 (70165463)

### Project Period (FY)

1998 - 1999

### Keywords

layered ventilation / VOC / TiO<sub>2</sub>-ED22-ED2-nano particles / Dust re-suspension / Room ventilation / Ventilation system / Visualization of flow / Conformability control

### Research Abstract

1998

1) Transport mechanism and distribution of VOC inside constructing wooden materials and its emission

1.1 Emission of VOC from constructing wood material and transport mechanism

Components and concentration distribution of VOC inside wooden constructing material were measured. Emission rate of VOC from the material surface was measured under various surface temperatures of material. It was found that emission rates increases with temperature and changes with components and constructing materials.

2) Generation of particulate materials in an indoor space

2.1 Effects of the walking motion on dust re-suspension from floor surface

The amount of dust re-suspension from floor by walking was measured for various speed of walking. It was clarified that the amount of re-suspended particles increased with the walking speed and changed with floor and shoes materials.

3) Numerical analysis of flow patterns in an indoor space

3.1 Fundamental study on the layered ventilation of the semi-closed space wit ...▼ More

## Research Products (2 results)

All Other

All Publications

[Publications] 古内正美: "発熱・発じんを伴う空間のレイヤーベンチレーションに関する基礎的検討"第十八回空気清澄とコンタミネーションコントロール研究大会予稿集. (2000) ▼

[Publications] MASAMI FURUUCHI: "Fundamental study on layered ventilation of the semi-closed space with heat and dust generation"18イイD1thイエD1 Annual Tech. Meeting on Air Cleaning and Contamination Control. (2000) ▼

URL: [https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-10650585/106505851999kenkyu\\_seika\\_hokoku](https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-10650585/106505851999kenkyu_seika_hokoku)

Published: 2001-10-22