I, Ben W. Fortson Jr., Secretary of State of the State of Georgia, do hereby certify that the articles of incorporation of "GEORGIA TECH RESEARCH INSTITUTE" were duly restated as set forth in the annexed articles of restatement granted by the Superior Court of Fulton County on the 21st day of October, 1975, and filed with the Clerk of that Court on the 21st day of October, 1975, that the original articles of restatement have been duly filed in the office of the Secretary of State and the fees paid therefor, as provided by law.

IN TESTIMONY WHEREOF, I have hereto set my hand and affixed the seal of my office, at the Capitol, in the City of Atlanta, this 21st day of October in the year of our Lord One Thousand Nine Hundred and Seventy Five and of the Independence of the United States of America the Two Hundredth.

[Signature]

Secretary of State, Ex-Officio Corporation Commissioner of the State of Georgia.
STATE OF GEORGIA

COUNTY OF FULTON

TO THE SUPERIOR COURT OF SAID COUNTY:

The petition of Georgia Tech Research Institute, (hereinafter referred to as "Petitioner") respectfully shows:

1. The Restated Articles of Incorporation of Petitioner, executed by said corporation, are attached hereto.

2. The registered office of Petitioner is located in Fulton County, Georgia.

WHEREFORE, Petitioner prays that the attached Restated Articles of Incorporation be granted.

[Signature]
Attorney for Petitioner

KING & SPALDING
2500 Trust Company of Georgia Building
Atlanta, Georgia 30303
404/658-1350
RESTATED ARTICLES OF INCORPORATION
OF
GEORGIA TECH RESEARCH INSTITUTE

1.
The name of the corporation is:
GEORGIA TECH RESEARCH INSTITUTE

2.
The corporation shall be a nonprofit corporation and shall have no capital stock and no shareholders.

3.
The corporation shall have perpetual duration.

4.
The corporation is organized and shall be operated exclusively for scientific, literary and educational purposes, or any one or more of any such stated purposes. The corporation may conduct schools and engage in other methods of education, conduct laboratories, engage in scientific research, and distribute and disseminate information resulting from research. Such scientific research may be engaged in for others, and also by others in behalf of the corporation. No part of the net earnings of the corporation shall inure to the benefit of, or be distributable to, its trustees, officers, or other private persons, except that the corporation shall be authorized
and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth above. No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office. Notwithstanding any other provision of these Articles, the corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from Federal income tax under Section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law), or (b) by a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law).

5.

The affairs of the corporation shall be managed by a Board of Directors, which shall be called a Board of Trustees and which shall have full and complete power to conduct all of the business and affairs of the corporation. Said Board shall consist of 12 members, to be selected as follows:
(a) Four members shall be from the faculty of the Georgia Institute of Technology, one of whom shall be the President thereof, and the other three of whom shall be selected by said President, to hold office at his will.

(b) Two members shall be selected by the governing body of the Georgia Tech National Alumni Association, Inc.

(c) Two members shall be selected by the governing body of the Georgia Tech Foundation, Inc.

(d) The foregoing eight members shall select four additional members from industry at large, without regard to whether such members are alumni of the Georgia Institute of Technology.

(e) The members selected pursuant to (b), (c) and (d) hereof shall serve for such terms as shall be fixed in accordance with the by-laws of the corporation.

6.

The Board of Trustees shall have power to adopt any by-laws regarding the corporation, not contrary to law or provisions of these Articles of Incorporation.

7.

In the event of liquidation of the corporation, for any reason, the corpus of the corporation (including all capital having arisen from contributions, all accumulated income not attributable to a contract with the Board of
Regents, and all surplus reserves) shall be paid over to Georgia Tech Foundation, Inc., upon the agreement that such funds will be held and used for charter purposes of Georgia Tech Foundation, Inc.; subject, however, to any special trust which applies to any of such corpus and to such conditions or directions as may be imposed by any court having jurisdiction over such liquidation. Upon liquidation of the corporation, for any reason, all funds remaining in reserves allocated to research under any agreement with the Board of Regents which have resulted from Georgia Institute of Technology contracts shall be paid over to the Georgia Institute of Technology, and all such funds which have resulted from contracts with the Engineering Experiment Station shall be paid over to the Engineering Experiment Station, to be held and used in their respective research programs.

8.

The corporation shall have all the powers now or hereinafter enumerated in Section 22-2202 of the Georgia Non-Profit Corporation Code.

9.

These Restated Articles of Incorporation include amendments which reword paragraphs 1 and 5 of the original
Articles of Incorporation approved on April 13, 1937, which delete paragraphs 3 and 4 of said original Articles of Incorporation, which paragraphs contain provisions relating to the principal office and the certain powers of the corporation, which reword and amend paragraph 2(2), added to said original Articles of Incorporation by an amendment approved on February 9, 1946, so as to remove the requirement for an Advisory Council, which reword and amend paragraph 2 of the said original Articles of Incorporation, as the same was amended on February 9, 1946, so as to incorporate therein certain language relating to tax exempt status under present Federal income tax law and regulations and also to incorporate therein the substance of paragraph 4 added to said original Articles of Incorporation by said amendment of February 9, 1946, and which further amend said original Articles of Incorporation by adding the provisions set out in paragraphs 3 and 7 above relating to the duration of the existence of the corporation and the distribution of the assets of the corporation upon liquidation; otherwise these restated Articles of Incorporation purport to restate and not to change all other provisions of the said original Articles of Incorporation, except for those deletions permitted by Georgia Code Section 22-2806(e).
10.

Said Restated Articles of Incorporation were duly authorized and adopted by the Board of Trustees on September 30, 1975 by the vote of ten Trustees of the corporation, the vote of seven Trustees being the minimum required to adopt said Restated Articles of Incorporation.

11.

Said Restated Articles of Incorporation supersede the original Articles of Incorporation as heretofore amended.

IN WITNESS WHEREOF, the Georgia Tech Research Institute has caused these Restated Articles of Incorporation to be executed and its corporate seal to be affixed, and has caused the foregoing to be attested, all by its duly authorized officers on this 16\textsuperscript{th} day of October, 1975.

GEORGIA TECH RESEARCH INSTITUTE

By: \\

President

Attest:

(Secretary)
STATE OF GEORGIA
COUNTY OF FULTON

ORDER

The petition of Georgia Tech Research Institute and the Restated Articles of Incorporation attached thereto having been presented to this Court, and it appearing that the said Restated Articles of Incorporation are valid and lawful, it is

ORDERED that the Restated Articles of Incorporation of Georgia Tech Research Institute be and hereby are declared and granted.

This 21st day of October, 1975.

O/E. E. Andrews
JUDGE, SUPERIOR COURT
Atlanta Judicial Circuit
Emeritus
Charter

This section contains the charter or "Restated Article of Incorporation." Also included are the certificates of the Secretary of State pertinent to the 1975 restatement of the articles, and the 1984 amendment changing the name of the corporation) as well as the petitions, amendments and court orders involved in the restatement and name change.
I, Max Cleland, Secretary of State of the State of Georgia, do hereby certify that

based on a diligent search of the records on file in this office, I find that the name of the following proposed domestic corporation to wit

"GEORGIA TECH RESEARCH CORPORATION"

is not identical with or confusingly similar to the name of any other existing domestic or domesticated or foreign corporation registered in the records on file in this office or to the name of any other proposed domestic or domesticated, or foreign corporation as shown by a certificate of the Secretary of State heretofore issued and presently effective.

This certificate is in full force and effective for a period of 4 calendar months from date of issuance. After such period of time, this certificate is void.

In TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of my office, at the Capitol, in the City of Atlanta, this 6th day of April, in the year of our Lord One Thousand Nine Hundred and Eighty Four and of the Independence of the United States of America the Two Hundred and Eight.

Max Cleland
SECRETARY OF STATE, EX-OFFICIO CORPORATION COMMISSIONER OF THE STATE OF GEORGIA
ARTICLES OF AMENDMENT

1.

The name of the Corporation is GEORGIA TECH RESEARCH INSTITUTE.

2.

The amendment to its Articles of Incorporation adopted by the Corporation is to change the name of the Corporation from GEORGIA TECH RESEARCH INSTITUTE to GEORGIA TECH RESEARCH CORPORATION.

3.

There are no members of the Corporation and accordingly, no members entitled to vote on said amendment.

4.

Said amendment was adopted by the Board of Trustees of GEORGIA TECH RESEARCH INSTITUTE at a meeting duly called and held on September 13, 1983. On September 13, 1983, there were twelve (12) trustees serving on the Board of Trustees and the affirmative vote of a majority of such trustees was needed for the adoption of said amendment. Said amendment was adopted by the affirmative vote of ten (10) of such trustees.

IN WITNESS WHEREOF, GEORGIA TECH RESEARCH INSTITUTE has caused these Articles of Amendment to be duly executed, its corporate seal to be affixed, and its seal and the execution hereof to be attested, all by its duly authorized officers, this 4th day of April, 1984.

GEORGIA TECH RESEARCH INSTITUTE

By: (President or Vice President)

(CORPORATE SEAL)

ATTEST:

[Signature]

Secretary
September 11, 1997

John C. Staton, Jr.
King and Spalding
191 Peachtree Street
Atlanta, GA 30303-1763

Subject: Articles of Amendment of Restated Articles of Incorporation of Georgia Tech Research Corporation, Inc.

Dear Mr. Staton:

Per your recent request to Ron Bell, the following items are enclosed:

1) Three originals of the subject amendment for your use in filing with the Georgia Secretary of State's Office.

2) A copy of the most recently approved GTRC By-Laws.

If you have any questions or if anything additional is needed, please do not hesitate to call me.

Sincerely,

Duane Hutchison
Interim General Manager

Enclosures: As stated
ARTICLES OF AMENDMENT

OF

RESTATED ARTICLES OF INCORPORATION

OF

GEORGIA TECH RESEARCH CORPORATION, INC.

1.

The name of the Corporation is Georgia Tech Research Corporation, Inc.

2.

The Corporation was incorporated on April 13, 1937.

3.

Article 5 of the Restated Articles of Incorporation of the Corporation is hereby amended so that it shall hereafter be as follows:

"The affairs of the Corporation shall be managed by a Board of Directors, which shall be called a Board of Trustees and which shall have full and complete power to conduct all of the business and affairs of the Corporation. Said Board shall consist of twelve (12) members, to be selected as follows:

(a) Three members shall be from the faculty of the Georgia Institute of Technology, one of whom shall be the President thereof, and the other two shall be selected by said President, to hold office at his will.

(b) One member shall be selected by the governing body of Georgia Tech National Alumni Association, Inc."
(c) One member shall be selected by the governing body of the Georgia Tech Foundation, Inc.
(d) The foregoing five members shall select seven additional members from industry at large, without regard to whether such members are alumni of the Georgia Institute of Technology.
(e) The members selected pursuant to (b), (c), and (d) shall serve for such terms as shall be fixed in accordance with the Bylaws of the Corporation."

4.

The foregoing amendment was adopted by a sufficient vote of the Board of Directors of the Corporation as of the date set forth below pursuant to O.C.G.A. Section 14-3-1002. There are no members of the Corporation from whom approval is required.
IN WITNESS WHEREOF, the Corporation has caused these Articles of Amendment to be executed, its corporate seal to be affixed, and its seal and the execution thereof to be attached, all by its duly authorized officers, this 9th day of September, 1997.

GEORGIA TECH RESEARCH CORPORATION, INC.

By: [Signature]
Chairperson

[CORPORATE SEAL]

Attest:

By: [Signature]
Secretary