MEMORANDUM OF UNDERSTANDING

BETWEEN THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY OF THE DEPARTMENT OF COMMERCE OF THE UNITED STATES OF AMERICA

AND THE PHYSIKALISCH TECHNISCHE BUNDESANSTALT AND

THE BUNDESANSTALT FÜR MATERIALFORSCHUNG UND -PRÜFUNG OF THE FEDERAL REPUBLIC OF GERMANY

CONCERNING COOPERATION IN CHEMISTRY, PHYSICS,
AND ENGINEERING MEASUREMENT SCIENCES, MATERIALS TECHNOLOGY,
STANDARDS-RELATED ACTIVITIES
AND INTERCHANGE OF TECHNICAL INFORMATION AND EXPERIENCES

Article I. Scope and Objectives

In order to provide a mechanism for scientific and technical cooperation in chemistry, physics, and engineering measurement sciences, materials technology, standards-related activities and interchange of technical information and experiences, the National Institute of Standards and Technology (NIST) of the Department of Commerce of the United States of America on the one hand, the Physikalisch-Technische Bundesanstalt (PTB) and the Bundesanstalt für Materialforschung und -prüfung (BAM) of the Federal Republic of Germany, on the other hand (hereinafter referred to as the "Parties") hereby agree to pursue scientific and technical cooperation in accordance with this Memorandum of Understanding (hereinafter referred to as the "Memorandum").

Article II. Cooperative Activities

Specific areas of cooperation of may include, but are not limited to, such areas of mutual interest as:

- 1. Assignment of long- term and short-term guest scientists to each Parties' laboratories for periods not to exceed 2 years;
- 2. Research stays by PTB and/or BAM scientists and engineers at NIST, under the NIST Guest Researcher Program. The general NIST terms for this program are specified in Appendix 1; those for PTB and BAM in Appendix 2;
- 3. Participation in seminars, workshops and training courses in each other's laboratories:

- 4. Exchange of publications;
- 5. Cooperative research projects carried out partially in each institution, including cooperation in the production of Standard Reference Data;
- 6. Mutual development and exchange of Certified Reference Materials;
- 7. Comparisons of national standards;
- 8. Calibrations of special instruments or standards, in cases where one Party has unique capabilities;
- 9. Technical cooperation between NIST experts on the one hand and PTB or BAM experts on the other hand to improve the current national schemes of scientific and industrial metrology, and to develop new metrological activities;
- 10. Technical cooperation in design and construction of new metrology laboratories; and
- 11. Temporary loan of equipment, when available, for the implementation of specific activities.

Article III. Source of Funding

Activities under this Memorandum are subject to personnel available to the Parties. Furthermore the obligations of the Parties hereunder are subject to the availability of appropriated funds. Under the Memorandum, the receiving-side will pay for facilities, supplies, and other research costs except for those which are required only to meet a Guest Researcher's special needs. The sending-side will continue normal support of the exchange scientists, including base salary and fringe benefits. In most cases, any subsistence allowance provided to compensate for differential costs of living will be provided by the sending-side. However, the receiving-side may, based on its availability of funds, provide a portion or all of the subsistence allowance if doing otherwise would prevent the exchange from occurring.

Article IV. Intellectual Property

The protection and distribution of intellectual property created or furnished in the course of cooperative activities under this Memorandum are set forth in Annex I, which is an integral part of this Memorandum.

Article V. Disclaimer

Information transmitted by one Party to another Party under this Memorandum shall be accurate to the best knowledge and belief of the transmitting Party, however the transmitting Party does not warrant the suitability of the information transmitted for any particular use or application by the receiving Party or any third Party.

Article VI. Planning and Review of Activities

Upon entry into force of this Memorandum, the Parties will name representatives who, at times mutually established by the Parties, and at a minimum once a year, will plan and review activities under this Memorandum and use their best abilities to mitigate disputes, if any. The point of contact for implementation of these activities for NIST shall be the NIST Office of the Director for International and Academic Affairs, for PTB and BAM their Presidents or other offices as notified in writing.

Article VII. Project Annexes

Any specific project activities carried out under this Memorandum shall be agreed upon by the Parties in writing. All cooperation will be coordinated in a manner consistent with the relevant laws and regulations of the United States of America and the Federal Republic of Germany. Whenever more than the exchange of technical information or exchange visits of individuals or promotion activities is planned to take place, such activity shall be described in a Project Annex to this Memorandum which shall set forth as appropriate to the activity, a work plan, staffing requirements, cost estimates, funding source, and other undertakings, obligations, or conditions not included in this Memorandum. In case of any inconsistency between the terms of this Memorandum and the terms of a Project Annex hereto, the terms of this Memorandum shall be controlling.

Article VIII. Entry into Force and Termination

This Memorandum shall enter into force upon signature by the Parties and remain in force for five (5) years, unless terminated earlier by either Party upon ninety (90) days' written notice to the other Party. This Memorandum may be amended or extended by written agreement of the Parties. The termination of this Memorandum shall not affect the validity or duration of projects under this Memorandum that are initiated prior to such termination.

Done at, in triplicate, on the	day of
The undersigned being duly authorized by their respective Governments have signed this Memorandum.	
FOR THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY OF THE UNITED STATES OF AMERICA	FOR THE PHYSIKALISCH - TECHNISCHE BUNDESANSTALT OF THE FEDERAL REPUBLIC OF GERMANY
	FOR THE BUNDESANSTALT FÜR MATERIALFORSCHUNG UND – PRÜFUNG OF THE FEDERAL REPUBLIC OF

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