

**AFFILIATION AGREEMENT**  
**FOR SCIENTIFIC COOPERATION**

**between**

**THE NATIONAL RESEARCH COUNCIL (ITALY)**

**and**

**THE UNIVERSITY OF TEXAS AT AUSTIN (USA)**

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THIS Affiliation Agreement For Scientific Cooperation (the “Agreement”) is entered by and between The National Research Council of Italy, also known as Consiglio Nazionale delle Ricerche, an Italian public organization established by legislative decree under the Laws of Italy to support scientific and technological research, with its headquarters in Rome, Italy (hereafter called “CNR”) and The University of Texas at Austin, an American institution of higher education established as state agency under the Constitution and Laws of the State of Texas, with its headquarters in Austin, Texas (hereafter called “University”) (the CNR and the University are sometimes hereinafter collectively referred to as the “Parties” and are sometimes hereinafter individually referred to herein as a “Party”).

Whereas, the participating parties believe that international understanding, scientific and technological collaboration and scholarly opportunities for their respective research faculty would be enhanced by international scientific cooperation;

Whereas, the purpose of this Agreement is to establish a scientific cooperation framework within which the Parties may establish and implement from time to time one or more scientific cooperation Programs of mutual benefit involving the research faculty and personnel of the two institutions, with the understanding that any Program subsequently established and implemented between the two institutions during the term of this Agreement shall be set forth in a separate Research Agreement or Program Agreement, as the case may be, which shall be reduced to writing and executed by authorized representatives of both parties;

**Section A: Affiliation Program Goals:**

The scope of activities of any Research Agreement or Program Agreement implemented under this Agreement shall be determined by the funds regularly available at both institutions

for the activities specified, and by the amount of financial assistance obtained by either institution from external sources. Each institution shall be solely responsible for expenses incurred by its employees under this Agreement, except as may be stipulated in any Research Agreement or Program Agreement. Any cooperative Program Research Agreement or Program Agreement entered into pursuant to this Agreement shall be in the standard form approved by the University and shall contain, among other provisions, the title, description, duration, financial arrangements, and an Intellectual Property Management Plan that is consistent with USA Federal Grant Award requirements for the disposition of Intellectual Property that may be developed as a result of or arising from the joint laboratory projects, research projects, workshops or any other initiatives that have been approved by the Parties, as well as the names of the scientists and scholars participating

The primary goals of this Affiliation Agreement are:

1. **Joint Research Projects.** To create conditions to acquire grant support for research projects to be carried out cooperatively between researchers at the two institutions for the purpose of advancing the following scientific objectives:
  - a) Reliable and non-destructive lift-off process for the metal-to-insulator transfer of silicene;
  - b) Fabrication of silicene-based Field Effect Transistor (FET);
  - c) Field modulation in silicene single layer and multilayer (e.g. ambipolar or semiconducting character) and mobility extraction;
  - d) Low operation voltage silicene field effect transistors with tunable transport properties
  - e) Structural optimization and mobility boosting of silicene-based channels
  - f) Production and integration of wafer-scale single layer or multilayer of defect-free silicene with tunable structure
  - g) Silicene functionalization: band gap opening, identification of silicene oxides and silicane;
  - h) Quantum (spin) Hall effect in silicene
  - i) Scientific dissemination through high impact publications and international conferences.
  - j) Establish a scientific leadership in the framework of emerging Xenex
  
2. **Joint Laboratory Projects.** To institute conditions to acquire grant support for researchers at each institution to collaborate and benefit from the laboratory resources and research environment of the other institution for the purpose of advancing the scientific objectives;
  
3. **Visiting Researcher Projects.** To create conditions for nomination of researchers at each institution that are established in their field to be designated a visiting researcher to visit the facilities of the other institution for the purpose of observing research and collaboration with faculty and researchers in their field.

4. **Joint Scholarly Exchange and Workshop Projects.** To create conditions for dissemination and exchange of scholarly materials, especially the products of research collaboration.

The individuals designated to coordinate the development and implementation of cooperative research Programs are listed at the end of this Agreement document. Their responsibilities entail the following:

1. Serve as liaison between the two institutions.
2. Facilitate identification of priority areas for research cooperation in consultation with each other, and taking into account anticipated real benefits to the development of scientific research in both countries.
3. Engage in research planning activities taking into account the likelihood of achieving sustained external support for the cooperative research projects in question after the planning activities are complete.
4. Propose implementation of funded cooperative research projects appropriate for each institution for each selected area.
5. Review on-going cooperative research projects and consult each other about proposed project continuation or termination as appropriate,
6. Develop periodic workshops for presentation either in Italy or the US, designed to discuss research priorities, build networks, and to explore possibilities for sustained research collaboration
7. Coordinate information exchange directly related to research collaboration.

## **Section B: Program Support Goals**

Each institution shall be responsible for expenses incurred by its employees under this Agreement and any Research Agreement or Program Agreement.

All matters related to the rights and responsibilities of employment, including the salaries and benefits of exchange faculty and staff, are the sole responsibility of the home institution.

When budgets permit, both institutions will provide seed funding as may be deemed appropriate by each institution for proposed research collaboration, used to engage in research planning activities with the goal of generating sustained external support for the project in question.

CNR may use available funding as may be deemed appropriate by CNR to nominate its researchers, in consultation with University, to come to University facilities in Austin for stays ranging up to three months, pursuant to the University standard terms and conditions for a visiting researcher, agreed to in writing by the Parties.

University may use available funding as may be deemed appropriate by University for its researchers, in consultation with CNR, to come to CNR facilities in Italy for stays ranging up to three months, pursuant to such terms and conditions as may be agreed to in writing by the Parties.

Visiting researcher visits shall be subject to the host institution's rules, regulations, and policies. The host institution will orient the visiting researcher to pertinent rules. The home institution will withdraw the faculty member from the visiting researcher assignment upon the request of the host institution.

The host institution will, on request, provide general assistance to visiting researcher in locating temporary living accommodations and information and assistance required to obtain a visa, and all other documents necessary to enter, and carry out the stipulated research activities in the host country. However, the ultimate responsibility for making the appropriate arrangements and meeting the legal requirements to enter, live and work in the host country is the responsibility of the visiting researcher and the home institution shall communicate this responsibility to visiting researcher.

## **Section C: Commencement, Responsibilities, Termination, etc.**

### ***Research and Program Agreement***

To become effective, all agreements with respect to a Research Project ("Research Agreement") or Collaborative Program ("Program Agreement") shall be reduced to writing, executed by authorized representatives of CNR and University.

### ***Additional Activities:***

Nothing in this Agreement shall be construed as an exclusive relationship, and this Agreement should not operate to prevent nor limit separate cooperative activities by either Party with other institutions or entities under individual or institutional agreements, irrespective whether such activities are supported financially by either Party or not.

The Parties may share such information as may be deemed appropriate by the providing party, on planned participation in multinational coordination opportunities afforded through the European Union and through other national and international programs and the Parties may consider using these opportunities for future research collaboration activities as appropriate.

***Responsibility of CNR:***

Except for acts to be performed by University pursuant to the provisions of this Agreement, CNR will furnish the premises, personnel, services, and all other items necessary for the research collaboration specified in the Research Agreement or Program Agreement. In connection with such Program, CNR will:

- (a) comply with all applicable federal, state, and municipal laws, ordinances, rules, and regulations; and certify such compliance upon request by University;
- (b) appoint a person to serve for CNR as liaison ("CNR Liaison"), subject to approval by University;

***Responsibility of University:***

Except for acts to be performed by CNR pursuant to the provisions of this Agreement, University will furnish the premises, personnel, services, and all other items necessary for the research collaboration specified in the Research Agreement or Program Agreement. In connection with such Program, University will:

- (a) comply with all applicable federal, state, and municipal laws, ordinances, rules, and regulations; and certify such compliance upon request by CNR;
- (b) appoint a person to serve for University as liaison ("University Liaison"), subject to approval by CNR.

***Liason:***

Each party designates the following officials to serve as its initial liaison to coordinate and facilitate activities under this Agreement.

**CNR Liason:**

Dr Virginia Coda Nunziante, Acting Head  
European And International Relations, CNR  
Consiglio Nazionale delle Ricerche  
Piazzale A. Moro, 7-00185 Rome (RM), Italy  
Tel. 06.4993.2057 - 3170  
Email: [virginia.codanunziante@cnr.it](mailto:virginia.codanunziante@cnr.it)

**University Liason:**

Prof. Deji Akinwande  
Associate Professor  
Department of Electrical & Computer Engineering,  
Cockrell School of Engineering  
1 University Station C0803  
Austin, TX 78712  
Email: [deji@ece.utexas.edu](mailto:deji@ece.utexas.edu)

### ***Funding***

Resources for the implementation of this Agreement and any Research Agreement or Program Agreement are dependent upon budgetary availability. Should a joint grant or contract be awarded, the designated “primary institution” shall be responsible for allocating funds according to the budgets approved by the granting agency, both institutions, and the Principal Investigators for support of the two groups, including salaries, supplies, equipment, travel, and indirect expenses.

### ***Information Exchange:***

The institutions agree to exchange information, as they deem appropriate, by the providing party, on the current state of their research in the areas of collaborative work. Similarly, they may make available to each other well before their publication or the filing of patent applications any manuscripts and notices of invention in these areas that fall within the terms of the agreement and are not subject to restrictions in other grants or contracts.

In order to promote the joint work and carry out this exchange on a non-commercial basis, the parties also may make available to one another such research materials and/or samples as may be deemed appropriate by the providing party within the terms of this agreement and not subject to restrictions in other grants or contracts.

### ***Compliance with Laws; U.S. Export Compliance Publications***

The Parties acknowledge that the exchange of information and performance of this Agreement, and any Research Agreement or Program Agreement, is subject to compliance with applicable United States laws, regulations, or orders including those that may relate to the export of technical data and equipment, such as International Traffic in Arms Regulations (“ITAR”) and/or Export Administration Act/Regulations (“EAR”), as may be amended, and agree to comply with all such laws, regulations or orders. No Party will export, directly or indirectly, any Confidential Information without first obtaining any required export license or government approval and, in the case of Confidential Information disclosed by University, without first obtaining permission from University’s Office of Sponsored Projects. In the event any Confidential Information is export-controlled, the Disclosing Party shall provide Receiving Party with written notice containing the nature of the export-controlled information, prior to any exchange of export-controlled Confidential Information

### ***Publications***

The parties may publish the results of their research collaboration with proper recognition of both institutions. The results of the joint work on a subject where both research groups have had original results and ideas already shall be published under the authorship of all investigators who made substantial contributions and under the titles of both the University of Texas at Austin and the National Research Council of Italy, regardless of where the research was performed.

### ***Intellectual Property***

Title to all inventions or discoveries conceived or reduced to practice solely by University in the performance of any Research Agreement or Program Agreement hereunder shall reside in University, title to all inventions or discoveries conceived or reduced to practice solely by CNR shall reside in CNR, and title to all inventions and discoveries conceived or reduced to practice jointly by CNR and University shall reside jointly in CNR and University. The Parties agree that nothing in this Agreement grants either Party any rights to any background intellectual property of the other Party created before the Effective Date of the Agreement. The Parties agree that no license under or title to any invention, patent, trademark, trade name or other intellectual property or other rights or interests in Confidential Information now or hereafter owned by or controlled by any Party is granted either expressly, by implication, estoppel or otherwise by this Agreement.

### ***Limitation of Liability***

The Parties acknowledge that the University is an agency of the State of Texas and under the Constitution and laws of the State of Texas possesses certain rights and privileges, is subject to certain limitations and restrictions, and only has such authority as is granted to it under the Constitution and the laws of the State of Texas. Notwithstanding any provision of this Agreement, nothing in this Agreement is intended to be, nor will it be construed to be, a waiver of the sovereign immunity of the State of Texas or a prospective waiver of restriction of any of the rights, remedies, claims and privilege of the State of Texas.

### ***Performance***

A delay in or failure of performance of either party that is caused by occurrences beyond the control of either party shall not constitute default hereunder, or give rise to any claim for damages

### ***Relationship of the Parties***

For the purposes of this Agreement and all services to be provided hereunder, the parties shall be, and shall be deemed to be, independent contractors and not agents or employees of the other party. Neither party shall have authority to make any statements, representations nor commitments of any kind, or to take any action which shall be binding on the other party, except as may be expressly provided for herein or authorized in writing. With respect to employee compensation for services provided in connection with this Agreement, each party shall be solely responsible for their own employees' salaries, withholding taxes, workers' compensation, and other employment related obligations.

### ***Use of Institutions' Name***

Neither party shall use the other institution's name, or any name or trademark in any form, including advertising, promotion or sales literature without first obtaining the written consent of the other institution.

### ***Oral Representations***

No oral representations of any officer, agent, or employee of CNR or University shall affect or modify any obligations of either party under this Agreement or any Research Agreement or Program Agreement.

### ***Notices***

All notices or other communications required or permitted to be given under the terms of this Agreement shall be in writing, and shall be deemed effective when: (i) sent by nationally-recognized overnight courier; (ii) facsimile or email with original following by regular mail; or (iii) deposited in the United States mail and sent by certified mail, postage prepaid, addressed as follows:

#### **If to CNR, addressed to:**

Dr Virginia Coda Nunziante, Acting Head  
European And International Relations, CNR  
Consiglio Nazionale delle Ricerche  
Piazzale A. Moro, 7-00185 Rome (RM), Italy  
Tel. 06.4993.2057 - 3170  
Email: [virginia.codanunziante@cnr.it](mailto:virginia.codanunziante@cnr.it)

#### **With a copy to:**

Dr. Paul Annunziato - Director  
European And International Relations, CNR  
Consiglio Nazionale delle Ricerche  
Piazzale Aldo Moro, 7-00185 Rome (RM), Italy  
Tel: 06 4993 3977 - 06 4993 3434  
Email: [attivita.europee@cnr.it](mailto:attivita.europee@cnr.it)

#### **And a copy to:**

Dr. Alessandro Molle  
Laboratorio MDM, IMM-CNR  
Consiglio Nazionale delle Ricerche  
Via C. Olivetti, 2  
20041 Agrate Brianza (MI), Italy  
Email: [Alessandro.Molle@mdm.imm.cnr.it](mailto:Alessandro.Molle@mdm.imm.cnr.it)

#### **If to the University, addressed to:**

Dr. Ahmed Tewfik, Chair,  
Dept. of Electrical & Computer Engineering,  
Cockrell School of Engineering  
1 University Station C0803  
Austin, TX 78712  
Email: [tewfik@austin.utexas.edu](mailto:tewfik@austin.utexas.edu)

#### **With a copy to:**

Dr. John G. Ekerdt  
Associate Dean for Research  
Cockrell School of Engineering  
301 E. Dean Keeton St. C2100  
Austin, TX 78712  
Email: [ekerdt@utexas.edu](mailto:ekerdt@utexas.edu)

#### **And a copy to:**

Prof. Deji Akinwande  
Associate Professor  
Dept. of Electrical & Computer Engineering,  
Cockrell School of Engineering  
1 University Station C0803  
Austin, TX 78712  
Email: [deji@ece.utexas.edu](mailto:deji@ece.utexas.edu)

### ***Non-Assignment***

Neither this Agreement nor a Program Agreement may be assigned by either party without the advance written consent of the other party.

***Amendment to Agreement***

No amendment to this Agreement shall be valid unless reduced to writing, signed by an authorized representative of each party.

***Applicable Law***

The validity, interpretation, performance, and enforcement of this Agreement and any Research Agreement or Program Agreement shall be governed by the laws of the State of Texas.

***Effective Date and Term***

The effective date of this Agreement is the last date either the University or CNR signs the Agreement. This Agreement will remain in force and effect for a term of five years from the effective date, and may be extended for up to three additional one year terms by mutual written agreement by both Parties; provided, either Party may terminate the Agreement for convenience and without recourse at any time by providing One Hundred Twenty (120) days written notice to the other Party. Termination of this Agreement shall not affect the rights and obligations of the Parties accrued prior to termination.

***[signature page follows]***

For the National Research Council by:

\_\_\_\_\_  
Dr Virginia Coda Nunziante, Acting Head  
European and International Relations  
Consiglio Nazionale delle Ricerche

Date \_\_\_\_\_

For the University of Texas:

\_\_\_\_\_  
Linda Shaunessy  
Business Contracts Administrator  
Office of the Vice President and CFO  
University of Texas at Austin

Date \_\_\_\_\_

**Approved:** University Dean by:

\_\_\_\_\_  
Sharon L. Wood, Dean  
Cockrell School of Engineering  
University of Texas at Austin

Date \_\_\_\_\_

**Approved:** University Vice President for  
Research by:

\_\_\_\_\_  
Juan M. Sanchez  
Vice President for Research  
University of Texas at Austin