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Education: Ph.D., Yale University, New Haven, Connecticut, 1972-1977
M.F.S., Yale University, New Haven, Connecticut, 1970-1972
M.A.T., Wesleyan University, Middletown, Connecticut, 1967-1968
B.A., Wesleyan University, Middletown, Connecticut, 1961-1965

Experience:

The Ecosystems Center, Marine Biological Laboratory, Woods Hole, 1976-Present
Assistant Scientist, 1976-1982; Associate Scientist, 1982-1987; Senior Scientist, 1987-Present; Acting Director, 1988-1989; Co-Director, 1989-2009
Associate Director for Environment, Office of Science and Technology Policy, Office of the President, Washington, DC, 1996-1997
Director, Ecosystems Studies Program, National Science Foundation, Washington, DC, 1986-1988
Associate in Research, The Hubbard Brook Ecosystem Study, Yale University, New Haven, CT, 1975-1976
Teaching Assistant, January Ecology Course, Marine Biological Laboratory, Woods Hole, MA, January 1975
Teaching Assistant in Soils, Yale University, New Haven, CT, 1973-1975
Biology Instructor, Foote School, New Haven, CT, 1972-1973
Biology Instructor, Weston High School, Weston, CT, 1968-1973
Biology Instructor, Kakamega Secondary School, Kakamega, Kenya (East Africa), 1966-1967

Offices and Honors:

Member, Sigma Xi
Trustee, Marine Biological Laboratory
Chair, US Committee for the Scientific Committee on Problems of the Environment
Vice Chair, International Geosphere-Biosphere Programme
President, Scientific Committee on Problems of the Environment
President, Ecological Society of America
Distinguished Alumni Award, Wesleyan University
Award of Excellence in Ecosystem Science, Natural Resources Ecology Laboratory, Colorado State University
Trustee, The H. John Heinz III Center for Science, Economics and the Environment
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Member, Cosmos Club
Member, American Philosophical Society
Fellow, American Academy of Arts and Sciences

Professional Society Memberships:

American Geophysical Union
Ecological Society of America
National Association for the Advancement of Science

Advisory Committees (selected)

International Geosphere-Biosphere Programme-Global Change and Terrestrial Ecosystems
International Geosphere-Biosphere Programme
Global Change System for Analysis, Research and Training
National Science Foundation – Biological Sciences Directorate
State of the Nation's Ecosystems (design team – The H. John Heinz III Center for Science, Economics and the Environment)

Publications (including In press):

- In press:** Melillo, J. M., J. M. Reilly, D. W. Kicklighter, A. C. Gurgel, T. W. Cronin, S. Paltsev, B. S. Felzer, A. P. Sokolov and C. A. Schlosser. Indirect emissions from biofuels: How Important? *Science*.
Felzer, B., J. Reilly, J. M. Melillo, D. W. Kicklighter, M. Sarofim, C. Wang, R. Prinn and Q. Zhuang. Future effects of ozone on carbon sequestration and climate change policy using a Global Biogeochemical Model. *Climatic Change*.
- 2009** Melillo, J. M., A.C. Gurgel, D. W. Kicklighter, J. M. Reilly, T. W. Cronin, B. S. Felzer, S. Paltsev, C. A. Schlosser, A. P. Sokolov and X. Wang. 2009. Unintended environmental consequences of a global biofuels program. MIT JPSPGC, Report 168, January, 32 p.
Balshi, M. S., A. D. McGuire, P. Duffy, M. Flannigan, D. W. Kicklighter and J. Melillo. 2009. Vulnerability of carbon storage in North American boreal forests to wildfires during the 21st century. *Global Change Biology* 15:1491-1510.
Karl, T. R., J. M. Melillo, T. C. Peterson (eds.), *Global Climate Change Impacts in the United States. A State of Knowledge Report from the U.S. Global Change Research Program*. Cambridge Univ. Press.
- 2008** Bradford, M. A., C. A. Davies, S. D. Frey, T. R. Maddox, J. M. Melillo, J. E. Mohan, J. F. Reynolds, K. K. Treseder and M. D. Wallenstein. 2008. Thermal adaptation of soil microbial respiration to elevated temperature. *Ecology Letters* 11(12):1316-1327.
Burton, A. J., J. M. Melillo and S. D. Frey. 2008. Adjustment of forest ecosystem root respiration as temperature warms. *Journal of Integrative Plant Biology* 50(11):1467-1483.
Corell, R. W., S. J. Hassol and J. M. Melillo. 2008. Emerging challenges: Methane from the Arctic: global warming wildcard, pp. 37-48. In: P. Harrison (ed.), *UNEP Yearbook 2008. An Overview of Our Changing Environment*. Division of Early Warning and Assessment (DEWA), United Nations Environment Programme (UNEP), Nairobi, Kenya.
Frey, S. D., R. Drijber, H. Smith and J. Melillo. 2008. Microbial biomass, functional capacity, and community structure after 12 years of soil warming. *Soil Biology & Biochemistry* 40(11): 2904-2907. 10.1016/j.soilbio.2008.07.020.
Frumhoff, P. C., J. J. McCarthy, J. M. Melillo, S. C. Moser, D. J. Wuebbles, C. Wake and E. Spanger-Siegfried. 2008. An integrated climate change assessment for the Northeast United States. *Mitigation and Adaptation Strategies for Global Change* 13:419-423.
Galford, G. L., J. F. Mustard, J. Melillo, A. Gendrin, C. C. Cerri, C. E. P. Cerri. 2008. Wavelet analysis of MODIS time series to detect expansion and intensification of row-crop agriculture in Brazil. *Remote Sensing of Environment* 112:576-587.

- Melillo, J. and O. Sala. 2008. Ecosystem services, pp. 75-115. In: E. Chivian and A. Bernstein (eds.), *Sustaining Life: How Human Health Depends on Biodiversity*. Oxford University Press, New York, NY.
- Robertson, P. G., V. H. Dale, O. C. Doering, S. P. Hamburg, J. M. Melillo, et al. 2008. Sustainable biofuels redux. *Science* 322:49-50.
- Sokolov, A. P., D. W. Kicklighter, J. M. Melillo, B. Felzer, C. A. Schlosser and T. W. Cronin. 2008. Consequences of considering carbon/nitrogen interactions on the feedbacks between climate and the terrestrial carbon cycle. *Journal of Climate* 21:3776-2796, doi: 10.1175/2008JCLI2038.1.
- Tian, H., J. Liu, J. M. Melillo, M. Liu, D. Kicklighter, X. Yan and S. Pan. 2008. The Terrestrial Carbon Budget in East Asia: Human and Natural Impacts, pp. 163-175. In: C. Fu, J. Freney and J. Steward (eds.), *Changes in the Human-Monsoon System of East Asia in the Context of Global Change*. World Scientific Publishing Co. Pte. Ltd., Singapore, Hackensack, London.
- 2007** Balshi, M. S., A. D. McGuire, Q. Zhuang, J. M. Melillo, D. W. Kicklighter, E. S. Kasischke, C. Wirth, M. Flannigan, J. Harden, J. S. Clein, T. J. Burnside, J. McAllister, W. A. Kurz, M. Apps and A. Shvidenko. 2007. The role of fire disturbance in the carbon dynamics of the pan-boreal region: A process-based analysis. *Journal of Geophysical Research* 112: G02029, doi: 10.1029/2006JG000380.
- Felzer, B. S., T. Cronin, J. M. Reilly, J. M. Melillo and X. Wang. 2007. Impacts of ozone on trees and crops. *Comptes Rendus Geosciences* 339(11-12):784-798.
- Cerri, C. E. P., G. Sparovek, M. Bernoux, W. E. Easterling, J. M. Melillo and C. C. Cerri. 2007. Tropical agriculture and global warming: Impacts and mitigation options. *Scientia Agricola* 64(1):83-99.
- Frumhoff, P.C., J.J. McCarthy, J.M. Melillo, S.C. Mose and D.J. Wuebbles. 2007. *Confronting Climate Change in the U.S. Northeast: Science, Impacts, and Solutions*. Synthesis report of the Northeast Climate Impacts Assessment (NECIA). Cambridge, MA: Union of Concerned Scientists (UCS).
- Reilly, J., B. Felzer, D. Kicklighter, J. Melillo, H. Tian and M. Asadoorian. 2007. Prospects for biological carbon sinks in greenhouse gas emissions trading systems, pp. 115-142. In: D. S. Reay, C. N. Hewitt, K. A. Smith and J. Grace (eds.), *Greenhouse Gas Sinks*. CABI, Wallingford, Oxfordshire, United Kingdom.
- Reilly, J., S. Paltsev, B. Felzer, X. Wang, D. Kicklighter, J. Melillo, R. Prinn, M. Sarofim, A. Sokolov and C. Wang. 2007. Global economic effects of changes in crops, pasture and forests due to changing climate, carbon dioxide and ozone. *Energy Policy* 35:5370-5383.
- Sokolov, A. P., D. W. Kicklighter, J. M. Melillo, B. Felzer, C. A. Schlosser and T.W. Cronin. 2007. *Consequences of Considering Carbon/Nitrogen Interactions on the Feedbacks Between Climate and the Terrestrial Carbon Cycle*. MIT Joint Program on Science and Policy of Global Change Report No. 151. Massachusetts Institute of Technology, Cambridge, Massachusetts. (see also http://web.mit.edu/globalchange/www/MITJPSPGC_Rpt151.pdf).
- Zhuang, Q., J. M. Melillo, A. D. McGuire, D. W. Kicklighter, R. G. Prinn, P. A. Steudler, B. S. Felzer and S. Hu. 2007. Net land-atmosphere exchanges of CH₄ and CO₂ in Alaska: implications for the region's greenhouse gas budget. *Ecological Applications* 17(1):203-212.
- 2006** Cerri, C. E. P., M. C. Piccolo, B. J. Feigl, K. Paustian, C. C. Cerri, R. L. Victoria and J. M. Melillo. 2006. Interrelationships among soil total C and N, microbial biomass, trace gas fluxes, and internal N-cycling in soils under pasture of the Amazon region. *Journal of Sustainable Agriculture* 27(4):45-69.
- Chen, H., H. Tian, M. Liu, J. Melillo, S. Pan and C. Zhang. 2006. Effect of land-cover change on terrestrial carbon dynamics in the southern United States. *Journal of Environmental Quality* 35:1533-1547.
- Euskirchen, E. S., A. D. McGuire, D. W. Kicklighter, Q. Zhuang, J. S. Clein, R. J. Dargaville, D. G. Dye, J. S. Kimball, K. C. McDonald, J. M. Melillo, V. E. Romanovsky and N. V. Smith. 2006.

- Importance of recent shifts in soil thermal dynamics on growing season length, productivity, and carbon sequestration in terrestrial high-latitude ecosystems. *Global Change Biology* 12:731-750.
- Grimm, N., A. Covich and J. Melillo. 2006. A vision for ecology's future: where are we today? *Frontiers in Ecology and the Environment* 4(3):115.
- Lü, A., H. Tian, M. Liu, J. Liu and J. M. Melillo. 2006. Spatial and temporal patterns of carbon emissions from forest fires in China from 1950 to 2000. *Journal of Geophysical Research* 111, D05313, doi:10.1029/2005JD006198.
- Neill, C., M. C. Piccolo, C. C. Cerri, P. A. Steudler and J. M. Melillo. 2006. Soil solution nitrogen losses during clearing of lowland Amazon forest for pasture. *Plant and Soil* 281(1-2):233-245.
- Zhuang, Q., J. M. Melillo, B. S. Felzer, D. W. Kicklighter, A. D. McGuire, M. C. Sarofim, A. Sokolov, R. G. Prinn, P. A. Steudler and S. Hu. 2006. CO₂ and CH₄ exchanges between land ecosystems and the atmosphere in northern high latitudes over the 21st century. *Geophysical Research Letters* 33(17): Art. No. L17403.
- 2005** Melillo, J. M., N. B. Grimm and W. H. Schlesinger. 2005. Ecology and the transition to sustainability. *Frontiers in Ecology and the Environment* 3(1):3-3.
- Melillo, J. M., N. B. Grimm and A. Covich. 2005. NEON: lighting the way forward. *Frontiers in Ecology and the Environment* 7(3):351.
- Cerri, C. C., J. M. Melillo, B. J. Feigl, M. C. Piccolo, C. Neill, P. A. Steudler, M. S. Carvalho, V. P. Godinho, C. E. P. Cerri and M. Bernoux. 2005. Recent history of the agriculture of the Brazilian Amazon Basin: Prospects for sustainable development and a first look at the biogeochemical consequences of pasture reformation. *Outlook on Agriculture* 34(4):215-223.
- Felzer, B., J. Reilly, J. M. Melillo, D. W. Kicklighter, M. Sarofim, C. Wang, R. Prinn and Q. Zhuang. 2005. Future effects of ozone on carbon sequestration and climate change policy using a global biogeochemical model. *Climatic Change* 73(3):345-373.
- Liu, J., H. Tian, M. Liu, D. Zhuang, J. M. Melillo and Z. Zhang. 2005. China's changing landscape during the 1990s: large scale land transformations estimated with satellite data. *Geophysical Research Letters* 32,L02405, doi:10.1029/2004GL021649.
- McGuire, A. D., M. Apps, F. S. Chapin III, R. Dargaville, M. D. Flannigan, E. S. Kasichke, D. Kicklighter, J. Kimball, W. Kurz, D. J. McRae, K. McDonald, J. Melillo, R. Myneni, B. J. Stocks, D. L. Verbyla and Q. Zhuang. 2005. Canada and Alaska, Chapter 9, pp. 139-161. *In: Land Change Science: Observing, Monitoring, and Understanding Trajectories of Change on the Earth's Surface*. Dordrecht, Netherlands, Kluwer Academic Publishers.
- Meyerson, L. A., J. Baron, J. M. Melillo, R. J. Naiman, R. I. O'Malley, G. Orians, M. A. Palmer, A. S. P. Pfaff, S. W. Running and O. E. Sala. 2005. Aggregate measures of ecosystem services: can we take the pulse of nature? *Frontiers in Ecology and the Environment* 3(1): 56-59.
- Neill, C., P. A. Steudler, D. C. Garcia-Montiel, J. M. Melillo, B. J. Feigl, M. C. Piccolo and C. C. Cerri. 2005. Rates and controls of nitrous oxide and nitric oxide emissions following conversion of forest to pasture in Rondônia. *Nutrient Cycling in Agroecosystems* 71:1-15.
- 2004** Melillo, J. M., P. A. Steudler, J. D. Aber, K. Newkirk, H. Lux, F. P. Bowles, C. Catricala, A. Magill, T. Ahrens and S. Morriseau. 2004. Soil warming – a major consequence of global climate change. Chapter 13, pp. 280-295. *In: D. Foster and J. Aber (eds.), Forests in Time, The Environmental Consequences of 1000 Years of Change in New England*. Yale University Press, New Haven, CT.
- Aber, J., A. Magill, K. Nadelhoffer, J. Melillo, P. Steudler, P. Micks, J. Hendricks, R. Bowden, W. Currie, W. McDowell and G. Berntson. 2004. Exploring the process of nitrogen saturation. Chapter 12, pp.259-279. *In: D. Foster and J. Aber (eds.), Forests in Time, The Environmental Consequences of 1000 Years of Change in New England*. Yale University Press, New Haven, CT.
- Cerri, C. E. P., M. Bernoux, V. Chaplot, B. Volkoff, R. L. Victoria, J. M. Melillo, K. Paustian and C. C. Cerri. 2004. Assessment of soil property spatial variation in an Amazon pasture: basis for selecting an agronomic experimental area. *Geoderma* 123:51-68.

- Cerri, C. E. P., C. C. Cerri, K. Paustian, M. Bernoux, and J. M. Melillo. 2004. Combining soil C and N spatial variability and modeling approaches for measuring and monitoring soil carbon sequestration. *Journal of Environmental Management* 33(Suppl. 1): S274-S288.
- Cerri, C. E. P., K. Paustian, M. Bernoux, R. L. Victoria, J. M. Melillo and C. C. Cerri. 2004. Modeling changes in soil organic matter in Amazon forest to pasture conversion with the Century model. *Global Change Biology* 10:815-832, doi: 10.1111/j.1529-8817.2003.00759.x.
- Felzer, B., D. Kicklighter, J. Melillo, C. Wang, Q. Zhuang and R. Prinn. 2004. Effects of ozone on net primary production and carbon sequestration in the conterminous United States using a biogeochemistry model. *Tellus* 56(3):230-248.
- Foster, D., J. Aber, R. Bowden, J. Melillo and F. Bazzaz. 2004. Comparison between physical disturbance and novel stresses. 2004. Chapter 14, pp. 296-299. *In: D. Foster and J. Aber (eds.), Forests in Time, The Environmental Consequences of 1000 Years of Change in New England.* Yale University Press, New Haven, CT.
- Garcia-Montiel, D. C., J. Melillo, P. A. Steudler, M. H. Tian, C. Neill, D. W. Kicklighter and C. Cerri. 2004. Emissions of N₂O and CO₂ from terra firme forests in Rondônia, Brazil. *Ecological Applications* 14(4) Supplement: S214-S220.
- Olsrud, M., J. M. Melillo, T. R. Christensen, A. Michelsen, H. Wallander and P.A. Olsson. 2004. Response of ericoid mycorrhizal colonization and functioning to global change factors. *New Phytologist* 162(2):459-469.
- Pan, Y., T. Luo, R. Birdsey, J. Hom and J. Melillo. 2004. New estimates of carbon storage and sequestration in China's forests: Effects of age-class and method on inventory-based carbon estimation. *Climatic Change* 67:211-236.
- Passianoto, C. C., T. Ahrens, B. J. Feigl, P. A. Steudler, J. B. do Carmo and J. M. Melillo. 2004. Diurnal changes in nitric oxide emissions from conventional tillage and pasture sites in the Amazon Basin: influence of soil temperature. *Plant & Soil* 258:21-29.
- Raupach, M. R., J. G. Canadell, D. C. E. Bakker, P. Ciais, M. J. Sanz, J. Y. Fang, J. M. Melillo, P. R. Lankao, J. A. Sathaye, E.-D. Schulze, P. Smith and J. Tschirley. 2004. Interactions between CO₂ stabilization pathways and requirements for a sustainable earth system, pp. 131-162. *In: C. B. Field and M. R. Raupach (eds.), The Global Carbon Cycle. SCOPE 62.* Island Press, Washington, DC, pp. 526.
- Zhuang, Q., J. M. Melillo, D. W. Kicklighter, R. G. Prinn, A. D. McGuire, P. A. Steudler, B. S. Felzer and S. Hu. 2004. Methane fluxes between terrestrial ecosystems and the atmosphere at northern high latitudes during the past century: A retrospective analysis with a process-based biogeochemistry model. *Global Biogeochemical Cycles* 18(3):GB3010, 10.1029/2004GB002239.
- 2003** Melillo, J. M., C. B. Field and B. Moldan. 2003. Element interactions and the cycles of life. An overview, pp. 1-12. *In: J. M. Melillo, C. B. Field and B. Moldan (eds.), Interactions of the Major Biogeochemical Cycles – Global Change and Human Impacts. SCOPE 61.* Island Press, Washington, DC.
- Austin, A. T., R. W. Howarth, J. S. Baron, F. S. Chapin III, T. R. Christensen, E. A. Holland, M. V. Ivanov, A. Y. Lein, L. A. Martinelli, J. M. Melillo and C. Shang. 2003. Human disruption of element interactions: Drivers, consequences, and trends for the twenty-first century, pp. 47-45. *In: J. M. Melillo, C. B. Field and B. Moldan (eds.), Interactions of the Major Biogeochemical Cycles – Global Change and Human Impacts. SCOPE 61.* Island Press, Washington, DC.
- Garcia-Montiel, D. C., J. M. Melillo, P. A. Steudler and C. C. Cerri. 2003. Carbon limitations to N₂O emissions in a humid tropical forest of the Brazilian Amazon. *Biology and Fertility of Soils* 38:267-272.
- Garcia-Montiel, D. C., P. A. Steudler, M. C. Piccolo, C. Neill, J. M. Melillo and C. C. Cerri. 2003. Nitrogen oxide emissions following wetting of dry soils in forest and pastures in Rondônia, Brazil. *Biogeochemistry*.64:319-336.

- Passianoto, C. C., T. Ahrens, B. J. Feigl, P. A. Steudler, J. B. do Carmo and J. M. Melillo. 2003. Changes in CO₂, N₂O, and NO emissions in response to conventional tillage and no-tillage management practices in the state of Rondônia, Brazil. *Biology and Fertility of Soils* 38:200-208.
- Tian, H., J. M. Melillo, D. W. Kicklighter, S. Pan, J. Liu, A. D. McGuire and B. Moore III. 2003. Regional carbon dynamics in monsoon Asia and its implications for the global carbon cycle. *Global and Planetary Change* 37:201-217.
- Zhuang, Q., A. D. McGuire, J. M. Melillo, J. S. Clein, R. J. Dargaville, D. W. Kicklighter, R. B. Myneni, J. Dong, V. E. Romanovsky, J. Harden, and J. E. Hobbie. 2003. Carbon cycling in extratropical terrestrial ecosystems of the Northern Hemisphere during the 20th Century: A modeling analysis of the influences of soil thermal dynamics. *Tellus* 55B:751-776.
- 2002** Melillo, J. M. 2002. How Camest Thou in this Pickle?, pp. 23-31. *In: Engineering and Environmental Challenges*. National Academy of Engineering Annual Meeting, October 24, 2000. National Academy Press, Washington, DC.
- Melillo, J. M. and E. B. Cowling. 2002. Reactive nitrogen and public policies for environmental protection. *Ambio* 31:150-158.
- Melillo, J. M., P. A. Steudler, J. D. Aber, K. Newkirk, H. Lux, F. P. Bowles, C. Catricala, A. Magill, T. Ahrens and S. Morrisseau. 2002. Soil warming and carbon-cycle feedbacks to the climate system. *Science* 298:2173-2176.
- Bernoux, M., V. Eschenbrenner, C. Cerri, J. Melillo and C. Feller. LULCF-based CDM: Too much ado for ... a small carbon market. *Climate Policy* 2:379-385.
- Clein, J. S., A. D. McGuire, X. Zhang, D. W. Kicklighter, J. M. Melillo, S. C. Wofsy, P. G. Jarvis and J. M. Massheder. 2002. Historical and projected carbon balances of mature black spruce ecosystems across North America: The role of carbon-nitrogen interactions. *Plant and Soil* 242:15-32.
- Dargaville, R. J., M. Heimann, A. D. McGuire, I. C. Prentice, D. W. Kicklighter, F. Joos, J. S. Clein, G. Esser, J. Foley, J. Kaplan, R. A. Meier, J. M. Melillo, B. Moore III, N. Ramankutty, T. Reichenau, A. Schloss, S. Sitch, H. Tian, L. J. Williams and U. Wittenberg. 2002. Evaluation of terrestrial carbon cycle models with atmospheric CO₂ measurements: Results from transient simulations considering increasing CO₂, climate, and land-use effects. *Global Biogeochemical Cycles* 16: 1092, doi:10.1029/2001GB001426.
- Garcia-Montiel, D. C., J. Melillo, P. A. Steudler and C. Neill. 2002. Relationship between N₂O and CO₂ emissions from the Amazon Basin. *Geophysical Research Letters* 29(6):14.1-14.3.
- McGuire, A. D., C. Wirth, M. Apps, J. Beringer, J. Clein, H. Epstein, D. W. Kicklighter, J. Bhatti, F. S. Chapin III, B. de Groot, D. Efremov, W. Eugster, M. Fukuda, T. Gower, L. Hinzman, B. Huntley, G. J. Jia, E. Kasischke, J. Melillo, V. Romanovsky, A. Shvidenko, E. Vaganov and D. Walker. 2002. Environmental variation, vegetation distribution, carbon dynamics and water/energy exchange at high latitudes. *Journal of Vegetation Science* 13:301-314.
- Pan, Y., A. D. McGuire, J. M. Melillo, D. W. Kicklighter, S. Sitch and I. C. Prentice. 2002. A biogeochemistry-based successional model and its application along a moisture gradient in the continental United States. *Journal of Vegetation Science* 13:369-382.
- Steudler, P. A., D. C. Garcia-Montiel, M. C. Piccolo, C. Neill, J. M. Melillo, B. J. Feigl and C. C. Cerri. 2002. Trace gas responses of tropical forest and pasture soils to N and P fertilization. *Global Biogeochemical Cycles* 16(2):10.1029/2001GB001394.
- 2001** Melillo, J. M., P. A. Steudler, B. J. Feigl, C. Neill, D. Garcia, M. C. Piccolo, C. C. Cerri and H. Tian. 2001. Nitrous oxide emissions from forests and pastures of various ages in the Brazilian Amazon. *Journal of Geophysical Research* 106(D24):34,179-34,188.
- Melillo, J., A. Janetos, D. Schimel and T. Kittel. 2001. Vegetation and biogeochemical scenarios. Chapter 2. *In: Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*, Report for the US Global Change Research Program. J. M. Melillo, A. C. Janetos and T. R. Karl (eds.), Cambridge University Press, Cambridge, UK.

- Garcia-Montiel, D. C., P. A. Steudler, M. C. Piccolo, J. M. Melillo, C. Neill and C. C. Cerri. 2001. Controls on soil nitrogen oxide emissions from forest and pastures in the Brazilian Amazon. *Global Biogeochemical Cycles* 15:1021-1030.
- McGuire, A. D., S. Sitch, J. S. Clein, R. Dargaville, G. Esser, J. Foley, M. Heimann, F. Joos, J. Kaplan, D. W. Kicklighter, R. A. Meier, J. M. Melillo, B. Moore III, I. C. Prentice, N. Ramankutty, T. Reichenau, A. Schloss, H. Tian, L. J. Williams and U. Wittenberg. 2001. Carbon balance of the terrestrial biosphere in the twentieth century: Analyses of CO₂, climate and land-use effects with four process-based ecosystem models. *Global Biogeochemical Cycles* 15:183-206.
- National Assessment Synthesis Team. 2001. Conclusions and Research Pathways, Chapter 18. *In: Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*, Report for the US Global Change Research Program. J. M. Melillo, A. C. Janetos and T. R. Karl (eds.), Cambridge University Press, Cambridge, UK.
- National Assessment Synthesis Team. 2001. *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*, Report for the US Global Change Research Program. J. M. Melillo, A. C. Janetos and T. R. Karl (eds.), Cambridge University Press, Cambridge, UK. 620 pp.
- Pan, Y., J. M. Melillo, D. W. Kicklighter, X. Xiao and A. D. McGuire. 2001. Modeling structural and functional responses of terrestrial ecosystems in China to changes in climate and atmospheric CO₂. *Acta Phytoecologica Sinica* 25(2):175-189.
- 2000 Clein, J. S., B. L. Kwiatkowski, A. D. McGuire, J. E. Hobbie, E. B. Rastetter, J. M. Melillo and D. W. Kicklighter. 2000. Modeling carbon responses of tundra ecosystems to historical and project climate: A comparison of a plot- and a global-scale ecosystem model to identify process-based uncertainties. *Global Change Biology* 6 (Suppl 1) 127-140.
- Garcia-Montiel, D., C. Neill, J. M. Melillo, S. M. Thomas, P. A. Steudler and C. C. Cerri. 2000. Soil phosphorus transformations after forest clearing for pasture in the Brazilian Amazon. *Soil Science of American Journal* 64:1792-1804.
- Magill, A. H., J. D. Aber, G. M. Berntson, W. H. McDowell, K. J. Nadelhoffer, J. M. Melillo and P. Steudler. 2000. Long-term nitrogen additions and nitrogen saturation in two temperate forests. *Ecosystems* 3:238-253.
- McGuire, A. D., J. Clein, J. M. Melillo, D. W. Kicklighter, R. A. Meier, C. J. Vorosmarty and M. C. Serreze. 2000. Modeling carbon responses of tundra ecosystems to historical and projected climate: The sensitivity of pan-arctic carbon storage to temporal and spatial variation in climate. *Global Change Biology* 6:S141-S159.
- McGuire, A. D., J. M. Melillo, J. T. Randerson, W. J. Parton, M. Heimann, R. A. Meier, J. S. Clein, D. W. Kicklighter and W. Sauf. 2000. Modeling the effects of snowpack on heterotrophic respiration across northern temperate and high latitude regions: Comparison with measurements of atmospheric carbon dioxide in high latitudes. *Biogeochemistry* 48:91-114.
- Rustad, L. E., J. M. Melillo, M. J. Mitchell, I. J. Fernandez, P. A. Steudler and P. J. McHale. 2000. Effects of soil warming on carbon and nitrogen cycling, pp. 357-381. *In: R. A. Mickler, R. A. Birdsey, and J. Horn (eds.), Responses of Northern U.S. Forests to Environmental Change*, Ecological Studies 139. Springer-Verlag, New York.
- Schimel, D., J. Melillo, H. Tian, A. D. McGuire, D. Kicklighter, T. Kittel, N. Rosenbloom, S. Running, P. Thornton, D. Ojima, W. Parton, R. Kelly, M. Sykes, R. Neilson and B. Rizzo. 2000. Contribution of increasing CO₂ and climate to carbon storage by ecosystems in the United States. *Science* 287:2004-2006.
- Shaver, G. R., J. Canadell, F. S. Chapin, III, J. Gurevitch, J. Harte, G. Henry, P. Ineson, S. Jonasson, J. Melillo, L. Pitelka and L. Rustad. Global warming and terrestrial ecosystems: A conceptual framework for analysis. 2000. *BioScience* 50:871-882.

- Tian, H., J. M. Melillo, D. W. Kicklighter, A. D. McGuire, B. Moore III and C. J. Vorosmarty. 2000. Climatic and biotic controls on interannual variations of carbon storage in undisturbed ecosystems of the Amazon Basin. *Global Ecology and Biogeography* 9:315-335.
- 1999 Melillo, J. M. 1999. Warm, warm on the range. *Science* 283:183-184.
- Hartley, A. E., C. Neill, R. Crabtree, J. M. Melillo and F. P. Bowles. 1999. Plant performance and soil N mineralization in response to simulated climate change in subarctic dwarf shrub heath. *Oikos* 86:331-343.
- Jenkins, J. C., D. W. Kicklighter, S. V. Ollinger, J. D. Aber, J. M. Melillo. 1999. Sources of variability in net primary production predictions at a regional scale: a comparison using PnET-II and TEM 4.0 in northeastern US forests. *Ecosystems* 2:555-570.
- Kicklighter, D. W., M. Bruno, S. Dönges, G. Esser, M. Heimann, J. Helfrich, F. Ift, F. Joos, J. Kaduk, G. H. Kohlmaier, A. D. McGuire, J. M. Melillo, R. Meyer, B. Moore, III, A. Nadler, I. C. Prentice, W. Sauf, A. Schloss, S. Sitch, U. Wittenberg, G. Würth. 1999. A first-order analysis of the potential role of CO₂ fertilization to affect the global carbon budget: A comparison study of four terrestrial biosphere models. *Tellus* 51B:343-366.
- Lewis, D. A., W. Garrison, E. Wommack, A. Whittemore, P. Steudler and J. Melillo. 1999. Influence of environmental changes on degradation of chiral pollutants in soils. *Nature* 401:898-901.
- Neill, C., M. C. Piccolo, J. M. Melillo, P. A. Steudler and C. C. Cerri. 1999. Nitrogen dynamics in Amazon forest and pasture soils measured by ¹⁵N pool dilution. *Soil Biology and Biochemistry* 31:567-572.
- Prinn, R., H. Jacoby, A. Sokolov, C. Wang, X. Xiao, Z. Yang, R. Eckaus, P. Stone, D. Ellerman, J. Melillo, J. Fitzmaurice, D. Kicklighter, G. Holian and Y. Liu. 1999. Integrated global system model for climate policy assessment: Feedbacks and sensitivity studies. *Climatic Change* 41(3/4):469-546.
- Reilly, J., R. Prinn, J. Harnisch, J. Fitzmaurice, H. Jacoby, D. Kicklighter, J. Melillo, P. Stone, A. Sokolov and C. Wang. 1999. Multi-gas assessment of the Kyoto Protocol. *Nature* 401:549-555.
- Tian, H., J. M. Melillo, D. W. Kicklighter, A. D. McGuire and J. Helfrich. 1999. The sensitivity of terrestrial carbon storage to historical climate variability and atmospheric CO₂ in the United States. *Tellus* 51B:414-452.
- Tian, H., J. M. Melillo, D. W. Kicklighter, A. D. McGuire, B. Moore, III and C. J. Vorosmarty. 1999. Parameters for global ecosystem models: Reply. *Nature* 399:536.
- 1998 Galloway, J. N., D. S. Ojima, and J. M. Melillo. 1998. Asian change in the context of global change: An overview. *In*: J. N. Galloway and J. M. Melillo (eds.), *Asian Change in the Context of Global Climate Change*, New York: Cambridge University Press.
- Heimann, M., G. Esser, A. Haxeltine, J. Kaduk, D. W. Kicklighter, W. Knorr, G. H. Kohlmaier, A. D. McGuire, J. Melillo, B. Moore, R. D. Otto, I. C. Prentice, W. Sauf, A. Schloss, S. Sitch, U. Wittenberg and G. Würth. 1998. Evaluation of terrestrial carbon cycle models through simulations of the seasonal cycle of atmospheric CO₂: First results of a model intercomparison study. *Global Biogeochemical Cycles* 12:1-24.
- Pan, Y., J. M. Melillo, A. D. McGuire, D. W. Kicklighter, L. F. Pitelka, K. Hibbard, L. L. Pierce, S. W. Running, D. S. Ojima, W. J. Parton, D. S. Schimel and other VEMAP Members. 1998. Modeled responses of terrestrial ecosystems to elevated atmospheric CO₂: A comparison of simulations by the biogeochemistry models of the Vegetation/Ecosystem Modeling and Analysis Project (VEMAP). *Oecologia* 114:389-404.
- Tian, H., J. M. Melillo, D. W. Kicklighter, A. D. McGuire, J. V. K. Helfrich III, B. Moore III and C. J. Vorosmarty. 1998. Effect of interannual climate variability on carbon storage in Amazonian ecosystems. *Nature* 396:664-667.
- Xiao, X., J. M. Melillo, D. W. Kicklighter, A. D. McGuire, R. G. Prinn, C. Wang, P. H. Stone and A. Sokolov. 1998. Transient climate change and net ecosystem production of the terrestrial biosphere. *Global Biogeochemical Cycles* 12:345-360.

- Xiao, X., J. M. Melillo, D. W. Kicklighter, Y. Pan, A. D. McGuire and J. Helfrich. 1998. Net primary production of terrestrial ecosystems in China and its equilibrium responses to changes in climate and atmospheric CO₂ concentration. *Acta Phytocologia Sinica* 22:97-118.
- 1997** Foster, D. R., J. D. Aber, J. M. Melillo, R. D. Bowden and F. A. Bazzaz. 1997. Forest response to disturbance and anthropogenic stress. Rethinking the 1938 hurricane and the impact of physical disturbance vs. Chemical and climate stress on forest ecosystems. *BioScience* 47(7): 437-445.
- Keller, M., J. Melillo and W. Z. de Mello. 1997. Trace gas emissions from ecosystems of the Amazon basin. *Ciencia e Cultura Journal of the Brazilian Association for the Advancement of Science* 49(1/2): 87-97.
- Magill, A. H., J. D. Aber, J. J. Hendricks, R. D. Bowden, J. M. Melillo and P. A. Steudler. 1997. Biogeochemical response of forest ecosystems to simulated chronic nitrogen deposition. *Ecological Applications* 7(2):402-415.
- McGuire, A. D., J. M. Melillo, D. W. Kicklighter, Y. Pan, X. Xiao, J. Helfrich, B. Moore III, C. J. Vorosmarty and A. L. Schloss. 1997. Equilibrium responses of global net primary production and carbon storage to doubled atmospheric carbon dioxide: Sensitivity to changes in vegetation nitrogen concentration. *Global Biogeochemical Cycles* 11:173-189.
- Neill, C., C. C. Cerri, J. M. Melillo, B. J. Feigl, P. A. Steudler, J. F. L. Moraes and M. C. Piccolo. 1997. Soil carbon stocks and dynamics following deforestation for pasture in Rondônia, pp. 9-28. *In: R. Lal, J. M. Kimble, R. F. Follett and B. A. Stewart (eds.), Soil Processes and the Carbon Cycle.* CRC Press, New York.
- Neill, C., J. M. Melillo, P. A. Steudler, C. C. Cerri, J. F. L. Moraes, M. C. Piccolo and M. Brito. 1997. Soil organic matter stocks following forest clearing for pasture in the southwestern Brazilian Amazon. *Ecological Applications* 7(4):1216-1225.
- Neill, C., M. C. Piccolo, C. C. Cerri, P. A. Steudler, J. M. Melillo and M. Brito. 1997. Net nitrogen mineralization and net nitrification rates in soils following deforestation for pasture across the southwestern Brazilian Amazon Basin landscape. *Oecologia* 110:243-252.
- Schimel, D. S., VEMAP Participants and B. H. Braswell. 1997. Continental scale variability in ecosystem processes: Models, data and the role of disturbance. *Ecol. Monogr.* 67:251-271.
- Vitousek, P. M., H. A. Mooney, J. Lubchenco and J. M. Melillo. 1997. Human domination of the Earth's ecosystems. *Science* 277:494-499.
- Xiao, X., D. W. Kicklighter, J. M. Melillo, A. D. McGuire, P. H. Stone and A. P. Sokolov. 1997. Linking a global terrestrial biogeochemical model and a 2-dimensional climate model: implications for the carbon budget. *Tellus* 49B:18-37.
- Xiao, X., J. M. Melillo, D. W. Kicklighter, A. D. McGuire, H. Tian, Y. Pan, C. J. Vorosmarty and Z. Yang. 1997. Transient climate change and potential croplands of the world in the 21st century. MIT Joint Program on Science and Policy of Global Change Report No. 18. Massachusetts Institute of Technology, Cambridge, Massachusetts. 28 p.
- 1996** Melillo, J. M. 1996. Carbon and nitrogen interactions in the terrestrial biosphere: Anthropogenic effects, pp. 431-450. *In: B. Walker and W. Steffen (eds.), Global Change and Terrestrial Ecosystems.* IGBP Book Series 2. Cambridge University Press, Cambridge.
- Melillo, J. M. 1996. Elevated carbon dioxide, litter quality and decomposition, pp. 199-206. *In: A. I. Breymeyer, D. O. Hall, J. M. Melillo and G. Ågren (eds.), SCOPE volume 56: Global Change: Effects on Coniferous Forests and Grasslands.* John Wiley & Sons.
- Melillo, J. M., R. A. Houghton, D. W. Kicklighter and A. D. McGuire. 1996. Tropical deforestation and the global carbon budget. *Annual Review of Energy and the Environment* 21: 293-310.
- Melillo, J. M., D. O. Hall and G. Ågren. 1996. Executive summary, pp. 1-16. *In: A. I. Breymeyer, D. O. Hall, J. M. Melillo and G. Ågren (eds.), SCOPE volume 56: Global Change: Effects on Coniferous Forests and Grasslands.* John Wiley & Sons.
- Melillo, J. M., I. C. Prentice, G. D. Farquhar, E.-D. Schulze and O. Sala. 1996. Terrestrial biotic responses to environmental change and feedbacks to climate, pp. 445-482. *In: J. T. Houghton and*

others (eds.), *Climate Change 1995 - The Science of Climate Change: Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, UK.

- Downs M. R., K. J. Nadelhoffer, J. M. Melillo and J. D. Aber. 1996. Immobilization of a ^{15}N labelled nitrate addition by decomposing forest litter. *Oecologia* 105:141-150.
- McGuire, A. D., D. W. Kicklighter and J. M. Melillo. 1996. Global climate change and carbon cycling in grasslands and conifer forests, pp. 389-412. *In*: A. I. Breymeyer, D. O. Hall, J. M. Melillo and G. Ågren (eds.), *SCOPE volume 56: Global Change: Effects on Coniferous Forests and Grasslands*. John Wiley & Sons.
- Neill, C., B. Fry, J. M. Melillo, P. A. Steudler, J. L. Moraes and C. C. Cerri. 1996. Forest- and pasture-derived carbon contributions to organic matter stocks and respiration of tropical pasture soils. *Oecologia* 107:113-119.
- Pan, Y., A. D. McGuire, D. W. Kicklighter and J. M. Melillo. 1996. The importance of climate and soils for estimates of net primary production: a sensitivity analysis with the terrestrial ecosystem model. *Global Change Biology* 2: 5-23.
- Piccolo, M. C., C. Neill, J. M. Melillo, C. C. Cerri and P. A. Steudler. 1996. ^{15}N natural abundance in forest and pasture soils of the Brazilian Amazon Basin. *Plant and Soil* 182:249-258.
- Steudler, P. A., J. M. Melillo, B. J. Feigl, C. Neill, M. C. Piccolo and C. C. Cerri. 1996. Consequence of forest-to-pasture conversion on CH_4 fluxes in the Brazilian Amazon Basin. *Journal of Geophysical Research* 101:18547-18554.
- Steudler, P. A., R. D. Jones, M. S. Castro, J. M. Melillo and D. Lewis. 1996. Microbial controls of methane oxidation in temperate forest agricultural soils, pp. 69-84. *In*: J. C. Murrell and D. P. Kelly (eds.), *Microbiology of Atmospheric Trace Gases*. NATO ASI series, Vol. 139.
- Williams, M., E. B. Rastetter, D. Fernandes, M. L. Goulden, S. C. Wofsy, G. R. Shaver, J. M. Melillo, J. W. Munger, S.-M. Fan and K. J. Nadelhoffer. 1996. Modelling the soil-plant-atmosphere continuum in a *Quercus-Acer* stand at Harvard Forest: the regulation of stomatal conductance by light, nitrogen and soil/plant hydraulic properties. *Plant, Cell and Environment* 19:911-927.
- 1995 Melillo, J. M. 1995. Human influences on the global N budget and their implications for the global carbon budget, pp. 117-133. *In*: S. Murai and M. Kimura (eds.), *Toward Global Planning of Sustainable Use of the Earth: Development of Global Eco-engineering*. Elsevier, Amsterdam, The Netherlands.
- Melillo, J. M., D. W. Kicklighter, A. D. McGuire, W. T. Peterjohn and K. Newkirk. 1995. Global change and its effects on soil organic carbon stocks, pp. 175-189. *In*: R. Zepp and others (eds.), *Report of the Dahlem Workshop on the Role of Nonliving Organic Matter in the Earth's Carbon Cycle*. John Wiley and Sons.
- Aber, J. D., S. V. Ollinger, C. A. Federer, P. B. Reich, M. L. Goulden, D. W. Kicklighter, J. M. Melillo and R. G. Lathrop, Jr. 1995. Predicting the effects of climate change on water yield and forest production in the northeastern U.S. *Climate Research* 5:207-222.
- Castro, M. S., J. M. Melillo, P. A. Steudler and J. W. Chapman. 1995. Soil moisture as a predictor of methane uptake by temperate forest soils. *Canadian Journal of Forest Research* 24:1805-1810.
- Castro, M. S., P. A. Steudler, J. M. Melillo, J. D. Aber and R. D. Bowden. 1995. Factors controlling atmospheric methane consumption by temperate forest soils. *Global Biogeochemical Cycles* 9:1-10.
- Feigl, B. J., J. M. Melillo and C. C. Cerri. 1995. Changes in the origin and quality of soil organic matter after pasture introduction in Rondônia (Brazil). *Plant and Soil* 175:21-29.
- Kittel, T. G. F., N. A. Rosenbloom, T. H. Painter, D. S. Schimel and VEMAP Modeling Participants. 1995. The VEMAP integrated database for modeling United States ecosystem/vegetation sensitivity to climate change. *Journal of Biogeography* 22:857-862.

- McGuire, A. D., J. M. Melillo, D. W. Kicklighter, and L. A. Joyce. 1995. Equilibrium responses of soil carbon to climate change: Empirical and process-based estimates. *Journal of Biogeography*.22:785-796.
- McGuire, A. D., J. M. Melillo and L. A. Joyce. 1995. The role of nitrogen in the response of forest net primary production to elevated atmospheric carbon dioxide. *Annual Review of Ecology and Systematics* 26:473-503.
- McKane, R. B., E. B. Rastetter, J. M. Melillo, G. R. Shaver, C. S. Hopkins, D. N. Fernandes, D. L. Skole, and W. H. Chomentowski. 1995. Effects of global change on carbon storage in tropical forests of South America. *Global Biogeochemical Cycles* 9:329-350.
- Moraes, J. F. L., C. C. Cerri, J. M. Melillo, D. Kicklighter, C. Neill, D. L. Skole and P. A. Steudler. 1995. Soil carbon stocks of the Brazilian Amazon Basin. *Soil Science Society of America Journal* 59:244-247.
- Nadelhoffer, K. J., A. F. Bouwman, M. Delaney, J. M. Melillo, W. Schäfer, M. C. Scholes, R. J. Scholes, Ch. Sonntag, W. G. Sunda, E. Veldkamp and E. B. Welch. 1995. Group report: Effects of climate change and human perturbations on interactions between nonliving organic matter and nutrients, pp. 227-256. *In: R. Zepp and Ch. Sonntag (eds.), Report of the Dahlem Workshop on the Role of Nonliving Organic Matter in the Earth's Carbon Cycle.* John Wiley and Sons.
- Nadelhoffer, K. J., M. Downs, B. Fry, J. D. Aber, A. H. Magill and J. M. Melillo. 1995. The fate of ¹⁵N-labelled nitrate additions to a northern hardwood forest in eastern Maine, USA. *Oecologia* 103:292-301.
- Neill, C., M. C. Piccolo, P. A. Steudler, J. M. Melillo, B. J. Feigl and C. C. Cerri. 1995. Nitrogen dynamics in soils of forests and active pastures in the western Brazilian Amazon Basin. *Soil Biology and Biochemistry* 27:1167-1175.
- Steudler, P. A., R. D. Jones, M. S. Castro, J. M. Melillo and D. Lewis. 1995. Microbial controls of methane oxidation in temperate forest agricultural soils, pp. 69-84. *In: J. C. Murrell and D. P. Kelly (eds.), The Microbiology of Atmospheric Trace Gases: Sources, Sinks and Global Change Process.* NATO ASI Series Global Environmental Change. Springer-Verlag, Berlin.
- VEMAP Members. 1995. Vegetation/Ecosystem Modeling and Analysis Project (VEMAP): Comparing biogeography and biogeochemistry models in a continental-scale study of terrestrial ecosystem responses to climate change and CO₂ doubling. *Global Biogeochemical Cycles*. 9:407-437.
- 1994 Melillo, J. M. 1994. Modelling land-atmosphere interactions: A short review, pp. 387-410. *In: W. B. Meyer and B. L. Turner II (eds.), Changes in Land Use and Land Cover: A Global Perspective.* Cambridge University Press.
- Castro, M., W. T. Peterjohn, J. M. Melillo, P. A. Steudler, H. L. Gholz and D. Lewis. 1994. Effects of nitrogen fertilization on fluxes of N₂O, CH₄ and CO₂ from soils in a Florida slash pine plantation. *Canadian Journal of Forest Research* 24:9-13.
- Kicklighter, D. W., J. M. Melillo, W. T. Peterjohn, E. B. Rastetter, A. D. McGuire and P. A. Steudler. 1994. Aspects of spatial and temporal aggregation in estimating regional carbon dioxide fluxes from temperate forest soils. *Journal of Geophysical Research* 99:1303-1315.
- Peterjohn, W. T., J. M. Melillo, P. A. Steudler, K. M. Newkirk, F. P. Bowles and J. D. Aber. 1994. The response of trace gas fluxes and N availability to elevated soil temperatures. *Ecological Applications* 4:617-625.
- Schimel, J., G. P. Robertson, D. Baldocchi, J. E. Bogner, E. A. Davidson, J. Duyzer, D. Ehhalt, D. Fowler, P. Groffman, K. Haider, V. A. Isidorov, L. Klemetsson, J. Melillo, K. A. Smith, W. H. Su and W. Wiprecht. 1994. Impacts of trace gas fluxes in mid-latitude ecosystems, pp. 124-132. *In: D. S. Ojima and B. H. Svensson (eds.), Trace Gas Exchange in a Global Perspective.* Ecological Bulletin, Stockholm.
- Smith, K. A., G. P. Robertson and J. M. Melillo. 1994. Exchange of trace gases between the terrestrial biosphere and the atmosphere in the midlatitudes, pp. 179-203. *In: R. G. Prinn (ed.), Global Atmospheric-Biospheric Chemistry.* Plenum Press, New York.

- 1993** Melillo, J. M., A. D. McGuire, D. W. Kicklighter, B. Moore III, C. J. Vorosmarty and A. L. Schloss. 1993. Global climate change and terrestrial net primary production. *Nature* 363:234-240.
- Aber, J. D., A. Magill, R. Boone, J. M. Melillo, P. Steudler and R. Bowden. 1993. Plant and soil responses to chronic nitrogen additions at the Harvard Forest, Massachusetts. *Ecological Applications* 3(1):156-166.
- Aber, J. D., C. Driscoll, C. A. Federer, R. Lathrop, G. Lovett, J. M. Melillo, P. Steudler and J. Vogelmann. 1993. A strategy for the regional analysis of the effects of physical and chemical climate change on biogeochemical cycles in northeastern (U.S.) forests. *Ecological Modelling* 67:37-47.
- Bowden, R. D., M. C. Castro, J. M. Melillo, P. A. Steudler and J. D. Aber. 1993. Fluxes of greenhouse gases between soils and the atmosphere in a temperate forest following a simulated hurricane blowdown. *Biogeochemistry* 21:61-71.
- Bowden, R. D., K. J. Nadelhoffer, R. D. Boone, J. M. Melillo and J. B. Garrison. 1993. Contributions of aboveground litter, belowground litter, and root respiration to total soil respiration in a temperate mixed hardwood forest. *Canadian Journal of Forest Research* 23:1402-1407.
- Castro, M. S., P. A. Steudler, J. M. Melillo, J. D. Aber and S. Millham. 1993. Exchange of N₂O and CH₄ between the atmosphere and soils in spruce-fir forests in the northeastern United States. *Global Biogeochemical Cycles* 18:119-135.
- Downs, M. R., K. J. Nadelhoffer, J. M. Melillo, and J. D. Aber. 1993. Foliar and fine root nitrate reductase activity in seedlings of four forest tree species in relation to nitrogen availability. *Trees: Structure and Function* 7:233-236.
- McGuire, A. D., L. A. Joyce, D. W. Kicklighter, J. M. Melillo, G. Esser and C. J. Vorosmarty. 1993. Productivity response of climax temperate forests to elevated temperature and carbon dioxide: A North American comparison between two global models. *Climatic Change* 24:287-310.
- Nadelhoffer, K. J., J. D. Aber, M. Downs, B. Fry and J. M. Melillo. 1993. Biological sinks for nitrogen additions to a forested catchment, pp. 64-70. *In*: L. Rasmussen, T. Brydges and P. Mathy (eds.), *Experimental Manipulations of Biota and Biogeochemical Cycling in Ecosystems: Approach, Methodologies, Findings*. Ecosystems Research Report No. 4 of the Commission of European Communities. ECSC-EEC-EAEC, Brussels-Luxembourg.
- Peterjohn, W. T., J. M. Melillo, F. P. Bowles and P. A. Steudler. 1993. Soil warming and trace gas fluxes: Experimental design and preliminary flux results. *Oecologia* 93:18-24.
- 1992** McGuire, A. D., J. M. Melillo, L. A. Joyce, D. W. Kicklighter, A. L. Grace, B. Moore III and C. J. Vorosmarty. 1992. Interactions between carbon and nitrogen dynamics in estimating net primary productivity for potential vegetation in North America. *Global Biogeochemical Cycles* 6:101-124.
- Rastetter, E. B., R. B. McKane, G. R. Shaver and J. M. Melillo. 1992. Changes in C storage by terrestrial ecosystems: How C-N interactions restrict responses to CO₂ and temperature. *Water, Air & Soil Pollution* 64:327-344.
- 1991** Aber, J. D., J. M. Melillo and C. A. McLaugherty. 1991. Predicting long-term patterns of mass-loss, nitrogen dynamics and soil organic matter formation from initial litter chemistry in forest ecosystems. *Canadian Journal of Botany* 68:2201-2208.
- Aber, J. D., J. M. Melillo, K. J. Nadelhoffer, J. Pastor and R. Boone. 1991. Factors controlling nitrogen cycling and nitrogen saturation in northern temperate forest ecosystems. *Ecological Applications* 1:303-315.
- Bowden, R. D., J. M. Melillo, P. A. Steudler and J. D. Aber. 1991. Effects of nitrogen addition on annual nitrous oxide fluxes from temperate forest soils in the Northeastern United States. *Journal of Geophysical Research* 96:9321-9328.
- Lubchenko, J., A. M. Olson, L. B. Brubaker, S. R. Carpenter, M. M. Holland, S. P. Hubbell, S. A. Levin, J. A. MacMahon, P. A. Matson, J. M. Melillo, H. A. Mooney, C. H. Peterson, H. Ronald Pulliam, L. A. Real, P. J. Regal and P. G. Risser. 1991. The sustainable biosphere initiative: An ecological research agenda. *Ecology* 72:371-412.

- McLellan, T., J. D. Aber, J. M. Melillo and K. J. Nadelhoffer. 1991. Determination of nitrogen, lignin and cellulose content of decomposing leaf material by near infrared reflectance. *Canadian Journal of Forest Research* 21:1684-1688.
- McLellan, T., M. E. Martin, J. D. Aber, J. M. Melillo, K. J. Nadelhoffer and B. Dewey. 1991. Comparison of wet chemical and near infrared reflectance measurements of carbon fraction chemistry and nitrogen concentration of forest foliage. *Canadian Journal of Forest Research* 21:1689-1693.
- Raich, J. W., E. B. Rastetter, J. M. Melillo, D. W. Kicklighter, P. A. Steudler, B. J. Peterson, A. L. Grace, B. Moore III and C. J. Vorosmarty. 1991. Potential net primary productivity in South America: Application of a global model. *Ecological Applications* 1:399-429.
- Rastetter, E. B., M. G. Ryan, G. R. Shaver, J. M. Melillo, K. J. Nadelhoffer, J. E. Hobbie and J. D. Aber. 1991. A general biogeochemical model describing the responses of the C and N cycles in terrestrial ecosystems to changes in CO₂, climate and N deposition. *Tree Physiology* 9:101-126.
- Steudler, P., J. Melillo, R. Bowden, M. Castro and A. Lugo. 1991. The effects of natural and human disturbances on soil nitrogen dynamics and trace gas fluxes in a Puerto Rican wet forest. *Biotropica* 23(4a):356-363.
- 1990** Melillo, J. M. and P. A. Steudler. 1990. The effect of nitrogen fertilization on the COS and CS₂ emissions from temperate forest soils. *Journal of Atmospheric Chemistry* 9:411-417.
- Melillo, J. M., T. V. Callaghan, F. I. Woodward, E. Salati and S. K. Sinha. 1990. Climate change-effects on ecosystems, pp. 282-310. *In: J. T. Houghton, G. J. Jenkins and J. J. Ephraums (eds.), Climate Change - The IPCC Scientific Assessment.* Cambridge Univ. Press.
- Aber, J. D., C. A. Wessman, D. L. Peterson, J. M. Melillo and J. H. Fownes. 1990. Remote sensing of litter and soil organic matter decomposition in forest ecosystems, pp. 87-103. *In: R. Hobbs and H. Mooney (eds.), Remote Sensing of Biosphere Functioning.* Springer Verlag, New York.
- Bowden, R. D., P. A. Steudler, J. M. Melillo and J. D. Aber. 1990. Annual nitrous oxide fluxes from temperate forest soils in the northeastern United States. *Journal of Geophysical Research* 95:13997-14005.
- Linkins, A. E., R. L. Sinsabaugh, C. M. McLaugherty and J. M. Melillo. 1990. Cellulase activity on decomposing leaf litter in microcosms. *Plant and Soil* 123:17-25.
- Linkins, A. E., R. L. Sinsabaugh, C. M. McLaugherty and J. M. Melillo. 1990. Comparison of cellulase activity on decomposing leaves in a hardwood forest and woodland stream. *Soil Biology and Biochemistry* 22:423-425.
- Ryan, M. G., J. M. Melillo and A. Ricca. 1990. A comparison of methods for determining proximate carbon fractions of forest litter. *Canadian Journal of Forest Research* 20:166-171.
- 1989** Melillo, J. M., J. D. Aber, A. E. Linkins, A. Ricca, B. Fry and K. J. Nadelhoffer. 1989. Carbon and nitrogen dynamics along the decay continuum: Plant litter to soil organic matter. *Plant and Soil* 115:189-198.
- Melillo, J. M., P. A. Steudler, J. D. Aber and R. D. Bowden. 1989. Atmospheric deposition and nutrient cycling, pp. 263-280. *In: M. O. Andreae and D. S. Schimel (eds.), Exchange of Trace Gases Between Terrestrial Ecosystems and the Atmosphere.* John Wiley & Sons Ltd.
- Aber, J. D., K. J. Nadelhoffer, P. A. Steudler and J. M. Melillo. 1989. Nitrogen saturation in northern forest ecosystems: Hypotheses and implications. *Bioscience* 39:378-386.
- Moore, B., M. P. Gildea, C. J. Vorosmarty, D. L. Skole, J. Melillo, B. J. Peterson, E. Rastetter and P. Steudler. 1989. Strategy for understanding changes in the metabolic system of the planet, pp 118-141. *In: M. B. Rambler, L. Margulis and R. Fester (eds.), Global Ecology.* Academic Press.
- Steudler, P. A., R. D. Bowden, J. M. Melillo and J. D. Aber. 1989. Influence of nitrogen fertilization on methane uptake in temperate forest soils. *Nature* 341:314-316.
- Vorosmarty, C. J., B. Moore III, A. L. Grace, M. P. Gildea, J. M. Melillo, B. J. Peterson, E. B. Rastetter and P. A. Steudler. 1989. Continental scale models of water balance and fluvial transport: An application to South America. *Global Biogeochemical Cycles* 3(3):241-265.

- 1988** Melillo, J. M., J. Fruci, R. A. Houghton, B. Moore III and D. L. Skole. 1988. Land-use change in the Soviet Union between 1850 and 1980: Causes of a net release of CO₂ to the atmosphere. *Tellus* 40B:116-128.
- Wessman, C. A., J. D. Aber, D. L. Peterson and J. M. Melillo. 1988. Foliar analysis using near-infrared reflectance spectroscopy. *Canadian Journal of Forest Research* 18:6-11.
- Wessman, C. A., J. D. Aber, D. L. Peterson and J. M. Melillo. 1988. Remote sensing of canopy chemistry and nitrogen cycling in temperate forest ecosystems. *Nature* 335:154-156.
- 1987** Houghton, R. A., R. D. Boone, J. R. Fruci, J. E. Hobbie, J. M. Melillo, C. A. Palm, B. J. Peterson, G. R. Shaver, G. M. Woodwell, B. Moore, D. L. Skole and N. Myers. 1987. The flux of carbon from terrestrial ecosystems to the atmosphere in 1980 due to changes in land use: Geographic distribution of the global flux. *Tellus* 39B:122-139.
- Naiman, R. J., J. M. Melillo, M. A. Lock, T. E. Ford and S. R. Reice. 1987. Longitudinal patterns of ecosystems processes and community structure in a subarctic river continuum. *Ecology* 68:1139-1156.
- 1986** Gildea, M. P., B. Moore, C. J. Vorosmarty, B. Bergquist, J. M. Melillo, K. Nadelhoffer and B. J. Peterson. 1986. A global model of nutrient cycling: I. Introduction, model structure and terrestrial mobilization of nutrients, pp 1-31. *In*: D. Correll (ed.), *Watershed Research Perspectives*. Smithsonian Press, Washington, D.C.
- Naiman, R. J., J. M. Melillo and J. E. Hobbie. 1986. Ecosystem alteration of boreal forest streams by beaver (*Castor canadensis*). *Ecology* 67(5):1254-1269.
- Norby, R. J., J. Pastor and J. M. Melillo. 1986. Carbon-nutrient interactions CO₂-enriched white oak: Physiological and long-term perspectives. *Tree Physiology* 2:233-241.
- Palm, C. A., R. A. Houghton, J. M. Melillo and D. L. Skole. 1986. Atmospheric carbon dioxide from deforestation in Southeast Asia. *Biotropica* 18:177-188.
- Palm, C. A., R. A. Houghton, J. M. Melillo, D. Skole and G. M. Woodwell. 1986. The effect of tropical deforestation on atmospheric CO₂, pp. 181-194. *In*: R. Lal, P. A. Sanchez and R. W. Cummings Jr. (eds.), *Land Clearing and Development in the Tropics*. A. A. Balkema, Rotterdam.
- Vorosmarty, C. J., M. P. Gildea, B. Moore III, B. J. Peterson, B. Bergquist and J. M. Melillo. 1986. A global model of nutrient cycling: II. Aquatic processing, retention and distribution of nutrients in large drainage basins, pp. 32-56. *In*: D. Correll (ed.), *Watershed Research Perspectives*. Smithsonian Environmental Research Center Symposium Volume.
- Waring, R., J. D. Aber, J. M. Melillo and B. Moore III. 1986. Precursors of change in terrestrial ecosystems. *BioScience* 36:433-438.
- 1985** Melillo, J. M., C. A. Palm, R. A. Houghton, G. M. Woodwell and N. Myers. 1985. A comparison of two recent estimates of disturbance in tropical forests. *Environmental Conservation* 12:37-40.
- Aber, J. D., J. M. Melillo, K. J. Nadelhoffer, C. A. McLaugherty and J. Pastor. 1985. Fine root turnover in forest ecosystems in relation to quantity and form of nitrogen availability: A comparison of two methods. *Oecologia* 66:317-321.
- Francis, M. M., R. J. Naiman and J. M. Melillo. 1985. Nitrogen fixation in subarctic streams influenced by beaver (*Castor canadensis*). *Hydrobiologia* 121:193-202.
- Houghton, R. A., R. D. Boone, J. M. Melillo, C. A. Palm, G. M. Woodwell, N. Myers, B. Moore III and D. L. Skole. 1985. Net flux of carbon dioxide from tropical forests in 1980. *Nature* 316:617-620.
- Lennon, J. M., J. D. Aber and J. M. Melillo. 1985. Primary production and nitrogen allocation of field grown sugar maples in relation to nitrogen availability. *Biogeochemistry* 1:135-154.
- McLaugherty, C. A., J. Pastor, J. D. Aber and J. M. Melillo. 1985. Forest litter decomposition in relation to soil nitrogen dynamics and litter quality. *Ecology* 66:266-275.
- Nadelhoffer, K. J., J. D. Aber and J. M. Melillo. 1985. Fine roots, net primary production, and soil nitrogen availability: A new hypothesis. *Ecology* 66:1377-1390.
- Peterson, B. J. and J. M. Melillo. 1985. The potential storage of carbon caused by eutrophication of the biosphere. *Tellus* 37:117-127.

- 1984** Melillo, J. M. 1984. Net primary production, net ecosystem production and nutrient availability. *Options Mediterraneennes* 84(1):95-110.
- Melillo, J. M. and J. D. Aber. 1984. Nutrient immobilization in decaying litter: An example of carbon nutrient interactions, pp. 193-215. *In*: F. Golley (ed.), *Trends in Ecological Research for the 1980's*. Plenum Press.
- Melillo, J. M., R. J. Naiman, J. D. Aber and A. E. Linkins. 1984. Factors controlling mass loss and nitrogen dynamics of plant litter decaying in northern streams. *Bulletin of Marine Science* 35(3):341-355.
- Hobbie, J. E. and J. M. Melillo. 1984. Role of microbes in global carbon cycling, pp. 389-393. *In*: M. J. Klug and C. A. Reddy (eds.), *Current Perspectives in Microbial Ecology*. Academic Press.
- Linkins, A. E., J. M. Melillo and R. L. Sinsabaugh. 1984. Factors controlling cellulase activity in terrestrial and aquatic ecosystems, pp. 572-579. *In*: M. J. Klug and C. A. Reddy (eds.), *Current Perspectives in Microbial Ecology*. Academic Press.
- McClaugherty, C. A., J. D. Aber and J. M. Melillo. 1984. Decomposition dynamics of fine roots in forested ecosystems. *Oikos* 42:378-386.
- Nadelhoffer, K. J., J. D. Aber and J. M. Melillo. 1984. Seasonal patterns of ammonium and nitrate uptake in nine temperate forest ecosystems. *Plant and Soil* 80:321-335.
- Naiman, R. J. and J. M. Melillo. 1984. Nitrogen budget of a subarctic stream altered by beaver (*Castor canadensis*). *Oecologia* 62:150-155.
- Pastor, J., J. D. Aber and J. M. Melillo. 1984. Biomass prediction using generalized allometric regressions for some northeast tree species. *Forest Ecology and Management* 7:265-274.
- Pastor, J., J. D. Aber, C. A. McLaugherty and J. M. Melillo. 1984. Aboveground production and N and P cycling along a nitrogen mineralization gradient on Blackhawk Island, Wisconsin. *Ecology* 65:256-268.
- Peterson, B. J. and J. M. Melillo. 1984. Global carbon-nitrogen-phosphorus cycle interactions: A key to solving the atmospheric CO₂ balance problem?, pp. 97-116. *In*: B. Moore and J. Pastor (eds.), *The Interaction of Global Biochemical Cycles*. NASA JPL Publication 84-21.
- Shaver, G. R. and J. M. Melillo. 1984. Nutrient budgets of marsh plants: efficiency concepts and relation to availability. *Ecology* 65:1491-1510.
- Woodwell, G. M., J. E. Hobbie, R. A. Houghton, J. M. Melillo, B. Moore III, A. Park, B. J. Peterson and G. R. Shaver. 1984. Measurement of changes in the vegetation of the earth by satellite imagery, pp. 221-240. *In*: G. M. Woodwell (ed.), *The Role of Terrestrial Vegetation in the global Carbon cycle: Measurement by Remote Sensing*. SCOPE 23. John Wiley and Sons, Ltd., Chichester.
- 1983** Melillo, J. M. and J. R. Gosz. 1983. Interactions of biogeochemical cycles in forest ecosystems, pp. 177-222. *In*: B. Bolin and R. B. Cook (eds.), *The Major Biogeochemical Cycles and Their Interactions*. John Wiley and Sons, New York.
- Melillo, J. M., J. D. Aber, P. A. Steudler and J. P. Schimel. 1983. Denitrification potentials in a successional sequence of northern hardwood forest stands. *In*: R. O. Hallberg (ed.), *Environmental Biogeochemistry, Volume 5*. Ecological Bulletin Stockholm, Sweden 35:217-228.
- Melillo, J. M., R. J. Naiman, J. D. Aber and K. N. Eshleman. 1983. The influence of substrate quality and stream size on wood decomposition dynamics. *Oecologia* 58:281-285.
- Aber, J. D., J. M. Melillo, C. A. McLaugherty and K. N. Eshleman. 1983. Potential sinks for mineralized nitrogen following disturbance in forest ecosystems. *In*: R. O. Hallberg (ed.), *Environmental Biogeochemistry, Volume 5*. Ecological Bulletin (Stockholm) 35:179-192.
- Houghton, R. A., J. E. Hobbie, J. M. Melillo, B. Moore III, B. J. Peterson, G. R. Shaver and G. M. Woodwell. 1983. Changes in the carbon content of terrestrial biota and soils between 1860 and 1980: A net release of CO₂ to the atmosphere. *Ecological Monographs* 53:235-262.
- Nadelhoffer, K. J., J. D. Aber and J. M. Melillo. 1983. Leaf-litter production and soil organic matter dynamics along a nitrogen-availability gradient in Southern Wisconsin (U.S.A.). *Canadian Journal of Forest Research* 13:12-21.

- Woodwell, G. M., J. E. Hobbie, R. A. Houghton, J. M. Melillo, B. Moore III, B. J. Peterson and G. R. Shaver. 1983. Global deforestation: contribution to atmospheric carbon dioxide. *Science* 222:1081-1086.
- Woodwell, G. M., J. E. Hobbie, R. A. Houghton, J. M. Melillo, B. Moore, A. B. Park, B. J. Peterson, G. R. Shaver and T. A. Stone. 1983. Deforestation measured by LANDSAT: Steps toward a method. TR005. United States Department of Energy, Washington, D.C. 63 pp.
- 1982** Melillo, J. M., J. D. Aber and J. F. Muratore. 1982. Nitrogen and lignin control of hardwood leaf litter decomposition dynamics. *Ecology* 63:621-626.
- Aber, J. D. and J. M. Melillo. 1982. FORTNITE: Computer model of organic matter and nitrogen dynamics in forest ecosystems. University of Wisconsin Research Bulletin R3130.
- Aber, J. D. and J. M. Melillo. 1982. Nitrogen immobilization in decaying hardwood litter as a function of initial nitrogen and lignin content. *Canadian Journal of Botany* 60:2263-2269.
- Aber, J. D., G. R. Hendrey, A. J. Francis, D. B. Botkin and J. M. Melillo. 1982. Potential effects of acid precipitation on soil nitrogen and productivity of forest ecosystems, pp. 411-433. *In*: F. M. D'Itri (ed.), *Acid Precipitation: Effects on Ecological Systems*. Ann Arbor Sciences.
- Aber, J. D., J. M. Melillo and C. A. Federer. 1982. Predicting the effects of rotation length, harvesting intensity and fertilization on yield from northern hardwood forests in New England. *Forest Science* 28:31-45.
- Aber, J. D., J. Pastor and J. M. Melillo. 1982. Changes in forest canopy structure along a site quality gradient in southern Wisconsin. *American Midland Naturalist* 108:256-265.
- McClaugherty, C. A., J. D. Aber and J. M. Melillo. 1982. The role of fine roots in the organic matter and nitrogen budgets of two forest ecosystems. *Ecology* 63:1481-1490.
- Pastor, J., J. D. Aber, C. A. McLaugherty and J. M. Melillo. 1982. Geology, soils and vegetation of Blackhawk Island, Wisconsin. *The American Midland Naturalist* 108: 266-277.
- Vitousek, P. M., J. R. Gosz, C. C. Grier, J. M. Melillo and W. A. Reiners. 1982. A comparative analysis of nitrification and nitrate mobility in forest ecosystems. *Ecological Monographs* 52:155-177.
- 1981** Melillo, J. M. 1981. Nitrogen cycling in deciduous forests. *In*: F. E. Clark and T. Rosswall (eds.), *Nitrogen Cycling in Terrestrial Ecosystems. Processes, Ecosystem Strategies, and Management Impacts*. *Ecological Bulletin (Stockholm)* 33:427-442.
- Botkin, D. B., J. M. Melillo and L. S. Wu. 1981. How ecosystems processes are linked to large mammal population dynamics, pp. 373-387. *In*: C. W. Fowler and T. Smith (eds.), *Dynamics in Large Mammal Populations*. John Wiley and Sons, New York.
- Moore, B., R. D. Boone, J. E. Hobbie, R. A. Houghton, J. M. Melillo, B. J. Peterson, G. R. Shaver, C. J. Vorosmarty and G. M. Woodwell. 1981. A simple model for analysis of the role of terrestrial ecosystems in the global carbon budget, pp. 365-385. *In*: B. Bolin (ed.), *Modelling the Global Carbon Cycle*, SCOPE 16. John Wiley and Sons, New York.
- Vitousek, P. M., W. A. Reiners, J. M. Melillo, C. C. Grier and J. R. Gosz. 1981. Nitrogen cycling and loss following forest perturbation: The components of response, pp. 115-128. *In*: G. W. Barrett (ed.), *Stress Effects on Natural Ecosystems*. John Wiley and Sons, New York.
- 1980** Aber, J. D. and J. M. Melillo. 1980. Litter decomposition: Measuring relative contributions of organic matter and nitrogen to forest soils. *Canadian Journal of Botany* 58:416-421.
- Aber, J. D., G. R. Hendrey, D. B. Botkin, A. J. Francis and J. M. Melillo. 1980. Simulation of acid precipitation effects on soil nitrogen and productivity in forest ecosystems. Brookhaven National Laboratory Report BNL-28658, Upton, N.Y.
- 1979** Melillo, J. M. and J. D. Aber. 1979. Symbiotic and non-symbiotic nitrogen fixation in forest ecosystems of the northeastern United States, pp. 309-317. *In*: J. C. Gordon, C. T. Wheeler and D. A. Perry (eds.), *Symbiotic Nitrogen Fixation in the Management of Temperate Forests*. Oregon State University, Corvallis, Oregon.

- Aber, J. D., D. B. Botkin and J. M. Melillo. 1979. Estimating total fiber production from different harvesting practices and rotation lengths in northern hardwoods. *Canadian Journal of Forest Research* 9:10-14.
- Vitousek, P. M. and J. M. Melillo. 1979. Nitrate losses from disturbed ecosystems: Patterns and mechanisms. *Forest Science* 25:605-619.
- Vitousek, P. M., J. R. Gosz, C. C. Grier, J. M. Melillo, W. A. Reiners and R. L. Todd. 1979. Nitrate losses from disturbed ecosystems. *Science* 204:469-474.
- 1978** Aber, J. D., D. B. Botkin and J. M. Melillo. 1978. Predicting the effects of different harvesting regimes on forest floor dynamics in northern hardwoods. *Canadian Journal of Forest Research* 8:308-316.
- Eshelman, K. N., J. D. Aber and J. M. Melillo. 1978. The role of wood decomposition in nitrogen cycling in forest ecosystems. *Biological Bulletin* 155:435.
- 1977** Melillo, J. M. 1977. Mineralization of nitrogen in northern forest ecosystems. Ph.D. Thesis, Yale University. 136 pp.
- Melillo, J. M., and F. H. Bormann. 1976. Reorganization of a terrestrial ecosystem following a perturbation, pp. 28-32. *In*: O. L. Loucks (ed.), *The Study of Species Transients, Their Characteristics and Significance for Natural Resource Systems*. TIE, Indianapolis, Indiana.
- Bormann, F. H., G. E. Likens and J. M. Melillo. 1977. Nitrogen budget in an aggrading northern hardwood forest ecosystem. *Science* 196:981-983.

Edited Volumes

- Melillo, J. M., C. B. Field and B. Moldan, editors. 2003. *Interactions of the Major Biogeochemical Cycles – Global Change and Human Impacts*. SCOPE 61. Island Press, Washington, DC (in press).
- Galloway, J. N., and J. Melillo, editors. 1998. *Asian Change in the Context of Global Climate Change*. New York: Cambridge University Press.
- Breymer, A. I., D. O. Hall, J. M. Melillo and G. I. Ågren, editors. 1996. *Global Change: Effects on Coniferous Forests and Grasslands*. SCOPE 56. John Wiley & Sons Ltd, Chichester, England.
- Paul, E. A. and J. M. Melillo, series editors. 1993. *Isotopic Techniques in Plant, Soil, and Aquatic Biology*. Academic Press, Inc., San Diego, CA.

Texts

- Aber, J. D. and J. M. Melillo. 2001. *Terrestrial Ecosystems*. 2nd edition. Brooks/Cole Publishing, Pacific Grove, CA. 556 p.
- Aber, J. D. and J. M. Melillo. 1991. *Terrestrial Ecosystems*. Saunders College Publishing, Philadelphia. 436 p.
- Melillo, J. M. 1975. *Ecology Primer, Laboratory Manual*. Pendulum Press Inc., West Haven, Connecticut. 100 pp.
- Melillo, J. M. 1972. *Ecology Primer*. Pendulum Press Inc., West Haven, Connecticut. 111 pp.