

## **An open letter from Nobel laureates**

The undersigned Nobel laureates voice our support for the Ukrainian people and the free and independent state of Ukraine as it faces Russian aggression.

In a move that recalls the infamous attack of Nazi Germany on Poland in 1939 (using similar tricks of feigned provocation) and on the Soviet Union in 1941, the government of the Russian Federation, led by President Putin, has launched an unprovoked military aggression — nothing else but a war — against its neighbor, Ukraine. We choose our words carefully here, for we do not believe the Russian people have a role in this aggression.

We join in condemning these military actions and President Putin's essential denial of the legitimacy of Ukraine's existence.

There is always a peaceful way to resolve disputes. The Russian invasion blatantly violates the United Nations Charter, which says "All members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state." It ignores the Budapest Memorandum of 1994, which obligated Russia and others to respect the sovereignty, independence, and existing borders of Ukraine.

Russia's security concerns can be addressed within the framework of the UN Charter, the 1975 Helsinki Final Act, and the 1990 Paris Charter. To make war, as President Putin and his collaborators have done, is an unwarranted, bloody, and unproductive way to a future.

The Russian invasion will stain the international reputation of the Russian state for decades to come. It will pose barriers to its economy and inflict hardships on its population. The sanctions imposed will restrict the ease of movement of its talented and hardworking people in the world. Why raise this fence between Russia and the world now?

Hundreds of Ukrainian soldiers, Russian soldiers, and Ukrainian civilians, including children, have died already. It's so sad, so unnecessary. We gather in this appeal to call upon the Russian government to stop its invasion of Ukraine and withdraw its military forces from Ukraine.

We respect the calm and the strength of the Ukrainian people. We are with you. Our hearts go out to the families and friends of all, Ukrainians and Russians, who have died and been injured already. May peace come to this piece of our beautiful world.

Peter Agre, 2003 Chemistry  
James P. Allison, 2018 Medicine  
Harvey J. Alter, 2020 Medicine  
Hiroshi Amano, 2014 Physics  
Werner Arber, 1978 Medicine  
Frances H. Arnold, 2018 Chemistry  
Richard Axel, 2004 Medicine  
David Baltimore, 1975 Medicine  
Barry Clark Barish, 2017 Physics  
J. Georg Bednorz, 1987 Physics  
Carlos Filipe Ximenes Belo, 1996 Peace  
Paul Berg, 1980 Chemistry  
Bruce A. Beutler, 2011 Medicine  
Gerd Binnig, 1986 Physics  
J. Michael Bishop, 1989 Medicine  
Elizabeth H. Blackburn, 2009 Medicine  
Michael S. Brown, 1985 Medicine  
Linda B. Buck, 2004 Medicine  
William C. Campbell, 2015 Medicine  
Mario R. Capecchi, 2007 Medicine  
Thomas R. Cech, 1989 Chemistry  
Martin Chalfie, 2008 Chemistry  
Emmanuelle Charpentier, 2020 Chemistry  
Steven Chu, 1997 Physics  
Aaron Ciechanover, 2004 Chemistry  
J. M. Coetzee, 2003 Literature  
Elias James Corey, 1990 Chemistry  
Robert F. Curl Jr., 1996 Chemistry  
Angus S. Deaton, 2015 Economics  
Johann Deisenhofer, 1988 Chemistry  
Peter A. Diamond, 2010 Economics  
Peter C. Doherty, 1996 Medicine  
Jennifer A. Doudna, 2020 Chemistry  
Jacques Dubochet, 2017 Chemistry  
Shirin Ebadi, 2003 Peace  
Robert F. Engle III, 2003 Economics  
Francois Englert, 2013 Physics  
Gerhard Ertl, 2007 Chemistry  
Eugene F. Fama, 2013 Economics  
Bernard L. Feringa, 2016 Chemistry  
Andrew Z. Fire, 2006 Medicine  
Joachim Frank, 2017 Chemistry  
Jerome I. Friedman, 1990 Physics  
Leymah Roberta Gbowee, 2011 Peace  
Andre Geim, 2010 Physics  
Reinhard Genzel, 2020 Physics  
Andrea Ghez, 2020 Physics  
Sheldon Glashow, 1979 Physics  
Joseph L. Goldstein, 1985 Medicine  
Carol W. Greider, 2009 Medicine  
David J. Gross, 2004 Physics  
F. Duncan M. Haldane, 2016 Physics  
Jeffrey Connor Hall, 2017 Medicine  
John L. Hall, 2005 Physics  
Serge Haroche, 2012 Physics  
Oliver Hart, 2016 Economics  
Leland H. Hartwell, 2001 Medicine  
Klaus Hasselmann, 2021 Physics  
Harald zur Hausen, 2008 Medicine  
Richard Henderson, 2017 Chemistry  
Dudley R. Herschbach, 1986 Chemistry  
Avram Hershko, 2004 Chemistry  
Roald Hoffmann, 1981 Chemistry  
Jules A. Hoffmann, 2011 Medicine  
Bengt Holmstrom, 2016 Economics  
Tasuku Honjo, 2018 Medicine  
Gerardus 't Hooft, 1999 Physics  
H. Robert Horvitz, 2002 Medicine  
Sir Michael Houghton, 2020 Medicine  
Robert Huber, 1988 Chemistry  
Tim Hunt, 2001 Medicine  
Louis J. Ignarro, 1998 Medicine  
Kazuo Ishiguro, 2017 Literature  
Elfriede Jelinek, 2004 Literature  
David Julius, 2021 Medicine  
William G. Kaelin Jr., 2019 Medicine  
Takaaki Kajita, 2015 Physics  
Eric R. Kandel, 2000 Medicine  
Tawakkol Karman, 2011 Peace  
Wolfgang Ketterle, 2001 Physics  
Klaus von Klitzing, 1985 Physics  
Makoto Kobayashi, 2008 Physics  
Brian K. Kobilka, 2012 Chemistry  
Roger D. Kornberg, 2006 Chemistry  
J. Michael Kosterlitz, 2016 Physics  
Finn E. Kydland, 2004 Economics

The 14th Dalai Lama, 1989 Peace  
Yuan T. Lee, 1986 Chemistry  
Robert J. Lefkowitz, 2012 Chemistry  
Anthony J. Leggett, 2003 Physics  
Jean-Marie Lehn, 1987 Chemistry  
Michael Levitt, 2013 Chemistry  
Tomas Lindahl, 2015 Chemistry  
Benjamin List, 2021 Chemistry  
Roderick MacKinnon, 2003 Chemistry  
David W.C. MacMillan, 2021 Chemistry  
Barry J. Marshall, 2005 Medicine  
Eric S. Maskin, 2007 Economics  
John C. Mather, 2006 Physics  
Michel Mayor, 2019 Physics  
Arthur B. McDonald, 2015 Physics  
Daniel L. McFadden, 2000 Economics  
Craig C. Mello, 2006 Medicine  
Robert C. Merton, 1997 Economics  
Hartmut Michel, 1988 Chemistry  
Paul R. Milgrom, 2020 Economics  
Patrick Modiano, 2014 Literature  
Paul L. Modrich, 2015 Chemistry  
William E. Moerner, 2014 Chemistry  
Edvard Moser, 2014 Medicine  
May-Britt Moser, 2014 Medicine  
Gerard Mourou, 2018 Physics  
Denis Mukwege, 2018 Peace  
Herta Muller, 2009 Literature  
Ferid Murad, 1998 Medicine  
Roger B. Myerson, 2007 Economics  
Erwin Neher, 1991 Medicine  
Ryoji Noyori, 2001 Chemistry  
Sir Paul Nurse, 2001 Medicine  
Christiane Nusslein-Volhard, 1995 Medicine  
John O'Keefe, 2014 Medicine  
Yoshinori Ohsumi, 2016 Medicine  
Satoshi Omura, 2015 Medicine  
Orhan Pamuk, 2006 Literature  
Ardem Patapoutian, 2021 Medicine  
James Peebles, 2019 Physics  
Arno Penzias, 1978 Physics  
Edmund S. Phelps, 2006 Economics  
William D. Phillips, 1997 Physics  
John C. Polanyi, 1986 Chemistry  
H. David Politzer, 2004 Physics  
Stanley B. Prusiner, 1997 Medicine  
Venkatraman Ramakrishnan, 2009 Chemistry  
Sir Peter J. Ratcliffe, 2019 Medicine  
Maria Ressa, 2021 Peace  
Charles M. Rice, 2020 Medicine  
Adam G. Riess, 2011 Physics  
Sir Richard J. Roberts, 1993 Medicine  
Michael Rosbash, 2017 Medicine  
Alvin E. Roth, 2012 Economics  
James E. Rothman, 2013 Medicine  
Bert Sakmann, 1991 Medicine  
Oscar Arias Sanchez, 1987 Peace  
Juan Manuel Santos, 2016 Peace  
Kailash Satyarthi, 2014 Peace  
Jean-Pierre Sauvage, 2016 Chemistry  
Randy W. Schekman, 2013 Medicine  
Brian P. Schmidt, 2011 Physics  
Gregg L. Semenza, 2019 Medicine  
Phillip A. Sharp, 1993 Medicine  
K. Barry Sharpless, 2001 Chemistry  
Dan Shechtman, 2011 Chemistry  
Robert J. Shiller, 2013 Economics  
Hideki Shirakawa, 2000 Chemistry  
George P. Smith, 2018 Chemistry  
Hamilton O. Smith, 1978 Medicine  
Wole Soyinka, 1986 Literature  
Sir James Fraser Stoddart, 2016 Chemistry  
Horst L. Stormer, 1998 Physics  
Donna Strickland, 2018 Physics  
Jack W. Szostak, 2009 Medicine  
Joseph H. Taylor Jr., 1993 Physics  
Kip Stephen Thorne, 2017 Physics  
Susumu Tonegawa, 1987 Medicine  
Daniel C. Tsui, 1998 Physics  
Mario Vargas Llosa, 2010 Literature  
Harold E. Varmus, 1989 Medicine  
Sir John E. Walker, 1997 Chemistry  
Arieh Warshel, 2013 Chemistry  
Rainer Weiss, 2017 Physics

M. Stanley Whittingham, 2019 Chemistry  
Eric F. Wieschaus, 1995 Medicine  
Torsten N. Wiesel, 1981 Medicine  
Frank Wilczek, 2004 Physics  
Jody Williams, 1997 Peace  
David J. Wineland, 2012 Physics  
Sir Gregory P. Winter, 2018 Chemistry  
Kurt Wuthrich, 2002 Chemistry  
Shinya Yamanaka, 2012 Medicine  
Ada E. Yonath, 2009 Chemistry  
Michael W. Young, 2017 Medicine  
Muhammad Yunus, 2006 Peace