

## **Curriculum Vitae**

Professor Rainer Wolfgang Grün

(9/09/2021)

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Name: Rainer Wolfgang Grün  
 Date of birth: 14 April 1956 in Duisburg, W-Germany  
 Nationality: German  
 Residence Status: Australian Permanent Resident

### Academic Education, Qualifications and Fellowships of Learned Societies

Nov. 2008 Fellow of the Australian Academy of the Humanities (FAHA)  
 May 2008 Fellow of the Society of Antiquaries, London (FSA)  
 June 1998 Habilitation (Dr. rer. nat. habil.) and Venia legendi\*\* in Geology and Palaeontology, Universität zu Köln, Germany  
 Sept. 1997 Doctor of Science (DSc)\*, Australian National University  
 Feb. 1985 Dissertation (Dr. rer. nat.), Universität zu Köln  
 Nov. 1982 Diplom (Dipl. Geol.), Universität zu Köln  
 1975 - 1985 Study of geology at the Dept. of Geology, Universität zu Köln, Germany

### Employment/Position History

since June 2021 Honorary Professor, University of Queensland  
 since Feb. 2021 Emeritus Professor, The Australian National University  
 since July 2020 Adjunct Professor, Environmental Futures Research Institute, Griffith University  
 Jan. 2016 - Jan. 2020 Director, Australian Research Centre for Human Evolution, Griffith University  
 Oct. 2015 - July 2020 Professor of Archaeo geochemistry, Griffith University  
 Oct. 2016 - Jan. 2021 Honorary Professor, Research School of Earth Sciences, ANU  
 April 2009 - Sept. 2015 Professor E2, Research School of Earth Sciences, The Australian National University  
 July 1998 - Mar. 2009 Professor E1, ANU  
 Jan. 1998 - Sept. 2015 Research School of Earth Sciences  
 July 1994 - July 1998 Senior Fellow (reader), Research School of Pacific and Asian Studies (RSPAS), ANU  
 Feb. 1992 - July 1994 Fellow (senior lecturer), RSPAS  
 Feb. 1992 - Dec. 1997 Head of the Quaternary Dating Research Centre, RSPAS  
 Oct. 1989 - Jan. 1992 Senior research associate, Subdept. of Quaternary Research, University of Cambridge  
 Oct. 1987 - Sept. 1989 Research associate, University of Cambridge  
 Oct. 1987 - Jan. 1992 Head of TL/ESR dating laboratory, University of Cambridge  
 July 1985 - Sept. 1987 Postdoctoral-fellow, McMaster University, Hamilton, Canada  
 Apr. 1983 - June 1985 Research associate, Universität zu Köln, W-Germany  
 Dec. 1982 - Mar. 1983 Research assistant, Universität zu Köln  
 July 1979 - Nov. 1982 Teaching assistant, Universität zu Köln  
 Aug. 1978 - Feb. 1979 Practical training, Amt für Wasser - und Abfallwirtschaft, Düsseldorf

### Research Interests

Development of dating methods, in particular ESR and U-series dating. Application of dating to key questions in archaeological sciences, such as the timing of human evolution and technological change, as well as Quaternary research such as landscape dynamics and global sea level change. Application of elemental and isotopic micro-analysis of human remains for the reconstruction of diet and migration patterns.

### Publication/Citation Summary

1 book; 256 publications in refereed journals, 36 in books or monographs, 30 in non-refereed journals, 79 abstracts. Citations (source: Google scholar): career: > 17,100; 1 paper with **≥ 500** citations, 19 papers with **200-499**, 24 with **100-199**, 58 with **50-99**, 63 with **25-49** (the corresponding paper numbers in the reference list are coloured accordingly). H-index: 69 (Web of Science, cited reference search: Total: > 9300; h=52). ISI Researcher ID: A-1437-2012.

**The PDFs of all publications are available. Please request by email.**

**Grants** (until 2001, members of the Institute of Advanced Studies at ANU were excluded from the ARC).

- 2018-2022 ARC LP170100789 (Grün et al) *Archaeology and Natural History of the Mithaka Country*, \$607,331.
- 2016-2019 ARC DP160100811 (Frieman et al.) *Beyond migration and diffusion: The prehistoric mobility of people & ideas*, \$502,246
- 2015-2018 ARC DP150100487 (Stern et al.) *Landscape archaeology at Lake Mungo*, \$472,343
- 2011-2013 ARC DP110101415 (Grün et al.) *Understanding the migrations of prehistoric populations through direct dating and isotopic tracking of their mobility patterns*, \$ 460,000.
- 2010 ANU-MEC/LIEF LE 110100047 (Lister et al.) *Events through time: eruptions, extinctions, impacts, orebodies and orogenies. Upgrading the national argon geochronology network*, \$ 442,000.
- 2009 ANU-MEC/LIEF LE 0989624 (Gagan et al.) *A high performance stable-isotope microanalytical facility for environmental Earth science and climate change research*. \$ 200,000.
- 2007-2009 ARC Linkage LP0775058 with DEC and 3TTG (Grün et al.) *Environmental Evolution of the Willandra Lakes World Heritage Area*, \$738,000.
- 2006-2010 ARC DP0666084 (Roberts, Grün, Jacobs, Duller) *Out of Africa and into Australia: robust chronologies for turning points in modern human evolution and dispersal*, \$ 316,000.
- 2006-2008 ARC DP0664144 (Grün et al.) *Microanalysis of human fossils: new insights into age, diet and migration*, \$ 285,000
- 2005 ANU-MEC/LIEF LE 0560868 (Ireland et al.) *SHRIMP SI - Microscale stable-isotope analysis in the Earth Sciences*, total value: \$ 1,667,000
- 2005 ANU-MEC/LIEF LE0560956 (McCulloch et al.) *World-leading elemental and isotopic microanalysis and chemical speciation facilities for an environmentally sustainable Australia*, total value \$ 747,000
- 2003-2005 ARC DP 0342788 (Grün et al.) *Stable isotopes in marsupials: reconstruction of environmental change in Australia*: \$ 210,000.
- 2001 ARC-LIEF R00107950 (Grün et al.): Bruker Elexys ESR spectrometer, total value: \$ 348,000.
- 1995 ANU (Grün), Major Equipment Committee: *Gamma ray facility for non-destructive U-series dating*: \$115,000
- 1993 ANU, MEC (Grün), X and Q-band Bruker 106 ESR spectrometer, total value: \$320,000

### University Administration

- 2018 - 2019 Research Committee, Griffith University
- 2017 - 2018 HDR Committee, Griffith University
- 2016 - 2020 Management Committee, Environmental Futures Research Institute, Griffith University
- 2014- 2015 Associate Director, School Projects, RSES
- 2011 - 2013 Associate Director, Earth Environment, RSES
- 2005 Chair, Reclassification Committee RSES
- June-Sept. 2005 Coordinator, Earth Environment, RSES
- 2002 - 2004 Coordinator, Earth Environment, RSES
- 2001 - 2004 Member of the Board of the Institute of Advanced Studies
- 2000 - 2004 Member of the Faculty Board, RSES
- 2000 - 2001 Group Leader Environmental Geochemistry and Geochronology, RSES
- 1996 - 1997 Chair of the Faculty of the Research School of Pacific and Asian Studies (RSPAS)
- 1996 - 1997 Member of the Strategy Committee, ANU
- 1996 - 1997 Member of the Committee on General Policies, ANU
- 1996 - 1997 Member of the Public Affairs Committee, ANU
- 1995 - 1997 Member of the Promotions Committee, RSPAS
- 1995 - 1997 Member of the Board of the Institute of Advanced Studies, ANU
- 1993 - 1995 Convenor of the Graduate Program Quaternary and Regolith Studies
- 1992 - 1997 Member of the Faculty Board, RSPAS

**Visiting Professorships/Fellowships**

since Jan. 2020	Centro Nacional de Investigación sobre la Evolución Humana, Burgos, Spain
June 2019	Institut des dynamiques de la surface terrestre, Université de Lausanne
May 2015	Département de Préhistoire du Muséum National d'Histoire Naturelle, Paris
May 2012	Dipartimento di Scienze Chimiche e Geologiche, Università degli Studi di Cagliari, Italy
April 2010	Appointment as Guest Professor to the State Key Laboratory of Earthquake Dynamics, Institute of Geology, Chinese Earthquake Administration, Beijing
Aug - Nov 2009	Institut des Sciences humaines et sociales du CNRS, Bordeaux Laboratoire d'Anthropologie des populations du Passé, Université de Bordeaux I
April 2009	Chinese Earthquake Administration, Beijing
March 2009	Département de Préhistoire du Muséum National d'Histoire Naturelle, Paris
December 2007	Département de Préhistoire du Muséum National d'Histoire Naturelle, Paris
May/June 2006	Département de Préhistoire du Muséum National d'Histoire Naturelle, Paris
May/June 2005	Département de Préhistoire du Muséum National d'Histoire Naturelle, Paris
April - July 2001	St. Catherine's College, Oxford
April - July 2001	Research Laboratory for Archaeology and the History of Art, University of Oxford
June - Dec. 1998	Privatdozent, Universität zu Köln
1995	Japanese Society for the Promotion of Science
1993	Academia Sinica

**Editorial Responsibilities**

2008-2017	Associate Editor <i>Archaeological and Anthropological Sciences</i>
2006-2019	Editor-in-Chief of <i>Quaternary Geochronology</i>
2005-2015	Member of Editorial Board of <i>Quaternary Science Reviews</i>
2001-2003	Associate Editor of <i>Journal of Human Evolution</i>
1997-2005	Member of Editorial Board of <i>Quaternary International</i>
1997-1999	Associate Editor of <i>Journal of Human Evolution</i>
1994-2012	Member of Editorial Board of <i>Radiation Measurements</i>
1994	Coeditor of <i>Quaternary Science Reviews</i> for the conference proceedings of the 7 <sup>th</sup> International Specialist Seminar on TL and ESR Dating
1993-1998	Member of Editorial Board of <i>Archaeometry</i>
1993-2005	Editor of <i>Quaternary Geochronology (QSR)</i>
since 1992	Member of reviewers' panel of <i>Ancient TL</i>
1991-1993	Associate Editor of <i>Journal of Human Evolution</i>
1991	Coeditor of <i>Quaternary Science Reviews</i> and <i>Nuclear Tracks and Radiation Measurements</i> for the conference proceedings of the 6 <sup>th</sup> International Specialist Seminar on TL and ESR Dating
1987	Coeditor of <i>Quaternary Science Reviews</i> and <i>Nuclear Tracks and Radiation Measurements</i> for the conference proceedings of the 5 <sup>th</sup> International Specialist Seminar on TL and ESR Dating

**Conference Activities**

- 2019 Chair of the Organising Committee of the First Asia Pacific Conference on Human Evolution. 25-27 June 2019, Brisbane.
- 2008-2017 Chairman of the Standing Scientific Committee for the International Conference on Luminescence and Electron Spin Resonance Dating.
- 2007/8 Organising Committee ANU Archaeological Science Conference, 6-8 February 2008.
- 2006/7 Organising Committee of the XVII INQUA Congress. 28 July - 3 August 2007, Cairns
- 2004 Organiser of Robertson Workshop on Environmental Geochemistry and Geochronology: Quaternary Geochronology. 30 April - 2 May 2004, Robertson.
- 1995/6 Chairman of the Organising Committee of the 8<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating. 22-26 April 1996, Canberra.
- 1995 Member of the Scientific Program Committee of the 4<sup>th</sup> International Symposium on ESR Dosimetry and Applications
- 1995 Organiser of 2<sup>nd</sup> ANZ Meeting on Quaternary Dating
- 1993 Organiser of 1<sup>st</sup> ANZ Meeting on Quaternary Dating
- 1991-2017 Member of the Standing Scientific Committee for the International Specialist Seminars on TL and ESR Dating, since 1996: International Conference on Luminescence and Electron Spin Resonance Dating.
- 1985, 88, 91 Member of the international advisory committee of the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> International Symposium on ESR Dosimetry and Applications.

**Postdoctoral Supervision**

- 2015-2016 Dr. Mathieu Duval, now Griffith University
- 2004-2010 Dr. Maxime Aubert, now Griffith University
- 1991-1992 Dr. W.J. Rink, now McMaster University, Canada
- 1990-1992 Dr. E.J. Rhodes, now University of Sheffield

**PhD Supervision**

- since 2014 H. James: reconstruction of human migrations using oxygen isotopes
- since 2013 F. Fang: ESR thermochronometry of the Eastern Himalayas
- 2012-2018 K. Long: Oxygen isotopes in fish otoliths. Now ANU.
- 2011-2016 M. Willmes: Sr tracing of ancient human populations in France. Now University of California, Davis
- 2007-2018 T. Kelly (topic: Environmental reconstruction of the Lake Mulurulu lunette), Now Geosciences Australia
- 2007-2013 I. Moffat (topic: Sr isotope tracing in the Levant and France). Now University of Cambridge.
- 2006-2010 R. Joannes-Boyau (Direct dating of human remains), Now Southern Cross University.
- 2001-2005 R. Fraser (Stable isotopes in marsupials), now Department of Archaeology, University of Oxford
- 1996-2000 D. Curnoe (Researches into early Homo in South Africa), now Department of Anatomy, The University of New South Wales
- 1993-1996 M. Abeyratne, (Multi-dating of archaeological sites in Sri Lanka), now Cultural Fund, Colombo, Sri Lanka

**Professional Development**

- Leadership course (2000): Managing yourself and managing others. Executive MBA Programme, Australian Graduate School of Management (and several short courses/refreshers since)

**Professional Society Activities**

- since 1991 Life member of Clare Hall College, Cambridge
- since 1987 Member of the Philosophical Society, Cambridge, since 2006 Life member
- since 1987 Member of the British Quaternary Research Association

**THESES**

- Habilitation (1998). ESR Dating: Basic Research and its application to the timing of modern human evolution. 412 + XLIX p., Universität zu Köln.
- DSc (1997). Contributions to Quaternary Geochronology, 1239 + XXXV p., The Australian National University, Canberra.
- Dissertation (1985). Beiträge zur ESR-Datierung, 157 p., Universität zu Köln.
- Diplom (1982). Map: Geologische Kartierung in der Bopparder Hauptmulde, 66 p., Universität zu Köln.
- Thesis:  $^{230}\text{Th}/^{234}\text{U}$ -Altersbestimmungen an Travertinen aus Stuttgart paläoklimatische Aussagen unter Verwendung veröffentlichter Altersbestimmungen an Travertinen, Höhlensintern und Strandterrassen, 99 p., Universität zu Köln.

\*DSc: Higher Doctorate, based on published works of which the supplicant is author or joint author. The degree is awarded if

- (a) *the submitted works represent outstanding creative achievement or an outstanding contribution to the field of knowledge in which those works fall; and*
- (b) *exhibit a level of originality and creativity that stamp the candidate as a major authority in that field.* (Australian National University, The Graduate School Handbook, 1996).

\*\*Habilitation: Based on the submission of a thesis which has to be different from the doctoral thesis. The work of the thesis has to demonstrate the ability of the applicant to conduct independent research and to represent an advancement of science. The Habilitation is concluded after a seminar to the Faculty of Science and a majority vote of the members of the Faculty to award the teaching qualification for German universities. After the public inaugural lecture, the teaching authorisation (*venia legendi*) is awarded (translated from: Habilitationsordnung der Mathematisch-Naturwissenschaftlichen Fakultät der Universität zu Köln vom 28. Mai 1990).

**LECTURES**Occasional Lectures:

Dept. of Physics, McMaster University  
 Dept. of Geography, Royal Holloway & Bedford New College  
 Dept. of Geography, Cambridge University  
 Dept. of Archaeology, Cambridge University

Lecture Series

*Quaternary Geochronology*. Graduate Seminar Course, Michelmas Term, 1989  
 Subdepartment of Quaternary Research, Cambridge University

*Radiometric Dating Techniques*. Graduate Seminar Course, Michelmas Term 1990  
 Subdepartment of Quaternary Research, Cambridge University

*Dating in Archaeology*. Undergraduate Course, Lent Term 1991  
 Department of Archaeology, Cambridge University

*Dating short course*, 1992  
 Dept. of Archaeology, The Faculties, ANU

*Tree ring and <sup>14</sup>C dating and Luminescence and ESR dating*. Annually 1993 to 1999.  
 Dept. of Archaeology and Anthropology, The Faculties, ANU.

8 hour lecture course on selected topics of Quaternary Geochronology, May 1997  
 Dept. of Archaeology, University of Beijing. Host: Prof. Chen Tiemei

*Quartäre Geochronologie*. Comprehensive lecture course (18 hours). Sommersemester 1997  
 Geologisches Institut der Universität zu Köln

*Isotopen-Geologie*. Lecture course (18 hours). Sommersemester 1998  
 Geologisches Institut der Universität zu Köln (SS98-Nr.: 6577)

Quaternary Dating Methods

Graduate Course: Introduction to the Earth Sciences at the Research School of Earth Sciences, July 1999.

*Radiocarbon, U-series and Trapped Charge Dating and their applications in Archaeology and Palaeoanthropology*. Annually 2000 to 2005 Dept. of Archaeology and Anthropology, The Faculties, ANU.

*Scientific dating techniques for archaeology and palaeoanthropology*. 2006 and 2007 (BIAN 3010) Dept. of Archaeology and Anthropology, ANU

*Scientific dating and isotope analysis for archaeology and palaeoanthropology*. Annually 2008-2015 (BIAN 3010/6510) Dept. of Archaeology and Anthropology, ANU.

Course coordinator *Perspectives on Human Evolution* (NSC3029). T3 2017, Griffith University



**PUBLICATIONS****BOOK**

Grün, R., 1989. *Die ESR-Altersbestimmungsmethode*. 132 p., Springer, Berlin - Heidelberg. (A1)

**PUBLICATIONS IN REFEREED JOURNALS****1983**

Grün, R., Brunnacker, K., 1983. Absolutes Alter jungpleistozäner Meeres-Terrassen und deren Korrelation mit der terrestrischen Entwicklung. *Zeitschrift für Geomorphologie*, N.F. 27: 257-264. (B1)

Hennig, G.J., Grün, R., 1983. ESR dating in Quaternary geology. *Quaternary Science Reviews* 2: 157-238.

(B2)

Hennig, G.J., Grün, R., Brunnacker, K., Pecci, M., 1983.  $^{230}\text{Th}/^{234}\text{U}$ - sowie ESR-Altersbestimmungen einiger Travertine in Ungarn. *Eiszeitalter und Gegenwart* 33: 9-19. (B3)

Hennig, G.J., Grün, R., Brunnacker, K., 1983. Interlaboratory comparison project of ESR dating, Phase I. *PACT* 9: 447-452. (B4)

Hennig, G.J., Grün, R., Brunnacker, K., 1983. Speleothems, travertines, and paleoclimates. *Quaternary Research* 20: 1-29. (B5)

**1984**

Debuyst, R., Dejehet, F., Grün, R., Apers, D., DeCanniere, P., 1984. Possibility of ESR dating without determination of annual dose. *Journal of Radioanalytical Nuclear Chemistry, Letters* 86: 399-410. (B6)

Grün, R., Brunnacker, K., Hennig, G.J., 1984. Paleoclimatic indications given by speleothems, spring deposited travertines and marine terraces. *Eiszeitalter und Gegenwart* 35: 199-200. (B7)

Grün, R., DeCanniere, P., 1984. ESR dating: Problems encountered in the evaluation of the naturally accumulated dose (AD) of secondary carbonates., 1984. *Journal of Radioanalytical Nuclear Chemistry, Letters* 85: 213-226. (B8)

Hennig, G.J., Grün, R., Brunnacker, K., 1984. Reply to Gordon and Smart on "Speleothems, Travertines and Paleoclimates". *Quaternary Research* 22: 148-149. (B9)

**1985**

Grün, R., Invernati, C., 1985. Uranium accumulation in teeth and its effect on ESR dating -A detailed study of a mammoth tooth. *Nuclear Tracks and Radiation Measurements* 10: 869-878. (B10)

Hennig, G.J., Geyh, M.A., Grün, R., 1985. The interlaboratory comparison project of ESR dating - Phase II. *Nuclear Tracks and Radiation Measurements* 10: 945-952. (B11)

Katzenberger, O., Grün, R., 1985. ESR dating of circumarctic molluscs. *Nuclear Tracks and Radiation Measurements* 10: 885-890. (B12)

Linke, G., Katzenberger, O., Grün, R., 1985. Description and ESR dating of the Holstein interglaciation. *Quaternary Science Reviews* 4: 319-331. (B13)

Radtke, U., Mangini, A., Grün, R., 1985. ESR dating of fossil marine shells. *Nuclear Tracks and Radiation Measurements* 10: 879-884. (B14)

**1986**

DeCanniere, P., Debuyst, R., Dejehet, F., Apers, D., Grün, R., 1986. ESR dating: A study of  $^{210}\text{Po}$ -coated geological and synthetic samples. *Nuclear Tracks and Radiation Measurements* 11: 211-220. (B15)

Grün, R., 1986. Beta dose attenuation in thin layers. *Ancient TL* 4: 1-8. (B16)

**1987**

Grün, R., 1987. Alpha dose attenuation in thin layers. *Ancient TL* 5(3): 6-8. (B17)

Grün, R., Schwarcz, H.P., 1987. Some remarks on "ESR dating of bones". *Ancient TL* 5(2): 1-9. (B18)

Grün, R., Schwarcz, H.P., 1987. Comments on multiple dating of a long flowstone core. *Radiocarbon* 29: 148-152. (B19)

Grün, R., Schwarcz, H.P., Zymela, S., 1987. ESR dating of tooth enamel. *Canadian Journal of Earth Sciences* 24: 1022-1037. (B20)

### 1988

Buhay, W., Schwarcz, H.P., Grün, R., 1988. ESR dating of fault gouge: the effect of grain size. *Quaternary Science Reviews* 7: 515-522. (B21)

Grün, R., Schwarcz, H.P., Chadam, J.M., 1988. ESR dating of tooth enamel: Coupled correction for U-uptake and U-series disequilibrium. *Nuclear Tracks and Radiation Measurements* 14: 237-241. (B22)

Grün, R., Schwarcz, H.P., Ford, D.C., Hentzsch, B., 1988. ESR dating of spring deposited travertines. *Quaternary Science Reviews* 7: 429-432. (B23)

Radtke, U., Grün, R., 1988. ESR dating of corals. *Quaternary Science Reviews* 7: 465-470. (B24)

Radtke, U., Grün, R., Schwarcz, H.P., 1988. Electron spin resonance dating of Pleistocene coral reef tracts of Barbados (W.I.). *Quaternary Research* 29: 197-215. (B25)

Schwarcz, H.P., Grün, R., 1988. Comment on M. Sarnthein, H.E. Stremme, and A. Mangini, "The Holstein Interglaciation: Time-Stratigraphic Position and Correlation to Stable-Isotope Stratigraphy of Deep-Sea Sediments". *Quaternary Research* 29: 75-79. (B26)

Schwarcz, H.P., Grün, R., 1988. ESR dating of level L 2/3 at La Micoque (Dordogne), France: Excavations of Debenath and Rigaud. *Geoarchaeology* 3: 293-296. (B27)

Schwarcz, H.P., Grün, R., Latham, A.G., Mania, D., Brunnacker, K., 1988. The Bilzingsleben archaeological site: New dating evidence. *Archaeometry* 30: 5-17. (B28)

Schwarcz, H.P., Grün, R., Vandermeersch, B., Bar-Yosef, O., Valladas, H., Tchernov, E., 1988. ESR dates for the hominid burial site of Qafzeh in Israel. *Journal of Human Evolution* 17: 733-737. (B29)

Zymela, S., Schwarcz, H.P., Grün, R., Stalker, A.M., Churcher, C.S., 1988. ESR dating of Pleistocene fossil teeth from Alberta and Saskatchewan. *Canadian Journal of Earth Sciences* 25: 235-245. (B30)

### 1989

Grün, R., 1989. ESR dating for the early Earth. *Nature* 338: 543-544. (B31)

Grün, R., 1989. Present status of ESR dating. *Applied Radiation and Isotopes* 40: 1045-1055. (B32)

Grün, R., 1989. Electron spin resonance (ESR) dating. *Quaternary International* 1: 65-109. (B33)

Grün, R., Macdonald, P.D.M., 1989. Non-linear fitting of TL/ESR dose response curves. *Applied Radiation and Isotopes* 40: 1077-1080. (B34)

Schwarcz, H.P., Buhay, W.M., Grün, R., Valladas, H., Tchernov, E., Bar-Yosef, O., Vandermeersch, B., 1989. ESR Dating of the Neanderthal Site, Kebara Cave, Israel. *Journal of Archaeological Science* 16: 653-659. (B35)

Schwarcz, H.P., Grün, R., 1989. ESR dating of tooth enamel from prehistoric archaeological sites. *Applied Geochemistry* 4: 329-330. (B36)

Stringer, C.B., Grün, R., Schwarcz, H.P., Goldberg, P., 1989. ESR dates for the hominid burial site of Es Skhul in Israel. *Nature* 338: 756-758. (B37)

### 1990

Grün, R., 1990. Dose response of the paramagnetic centre at  $g=2.0007$  in corals. *Ancient TL* 8: 20-22. (B38)

Grün, R., Beaumont, P., Stringer, C.B., 1990. ESR dating evidence for early modern humans at Border Cave in South Africa. *Nature* 344: 537-539. (B39)

Grün, R., Fenton, C., 1990. Internal dose rates of quartz grains separated from fault gouge. *Ancient TL* 8: 26-28. (B40)

Grün, R., Shackleton, N.J., Deacon, H., 1990. Electron-spin-resonance dating of tooth enamel from Klasies River Mouth Cave. *Current Anthropology* 31: 427-432. (B41)

Kolstrup, E., Grün, R., Mejdahl, V., Packman, S.C., Wintle, A.G., 1990. Stratigraphy and thermoluminescence dating of late-glacial cover sand in Denmark. *Journal of Quaternary Science* 5: 207-224. (B42)

Radtke, U., Grün, R., 1990. Revised reconstruction of middle and upper Pleistocene sea-level changes based on new chronologic and morphologic investigations in Barbados, West Indies. *Journal of Coastal Research* 6: 699-708. (B43)

Wendorf, F., Close, A.E., Schild, R., Gautier, A., Schwarcz, H.P., Miller, G.H., Kowalski, K., Krolik, H., Bluszcz, A., Robins, D., Grün, R., 1990. Le Dernier interglaciaire dans le Sahara oriental. *L'Anthropologie* 94: 361-391. (B44)

### 1991

Grün, R., 1991. Potential and problems of ESR dating. *Nuclear Tracks and Radiation Measurements* 18: 143-153. (B45)

Grün, R., 1991. Electron Spin Resonance age estimates on elephant teeth from the Balderton Sands and Gravels. Appendix 5 in: A. Brandon and M.G. Sumbler 'The Balderton Sand and Gravel: pre-Ipswichian cold stage fluvial deposits near Lincoln, England'. *Journal of Quaternary Science* 6: 135-137. (B46)

Grün, R., Mellars, P., Laville, H., 1991. ESR chronology of a 100,000-year archaeological sequence at Pech de l'Aze II, France. *Antiquity* 65: 544-551. (B47)

Grün, R., Rhodes, E.J., 1991. On the selection of dose points for ESR/TL dose response curves. *Ancient TL* 9: 40-46. (B48)

Grün, R., Stringer, C.B., 1991. ESR dating and the evolution of modern humans. *Archaeometry* 33: 153-199. (B49)

Grün, R., Stringer, C.B., Schwarcz, H.P., 1991. ESR dating of teeth from Garrod's Tabun cave collection. *Journal of Human Evolution* 20: 231-248. (B50)

Mellars, P., Grün, R., 1991. A comparison of the electron spin resonance and thermoluminescence dating methods: the results of ESR dating at Le Moustier (France). *Cambridge Archaeological Journal* 1: 269-276. (B51)

Rhodes, E.J., Grün, R., 1991. ESR behaviour of the paramagnetic centre at  $g=2.0018$  in tooth enamel. *Ancient TL* 9: 14-18. (B52)

Schwarcz, H.P., Bietti, A., Buhay, W.M., Stiner, M., Grün, R., Segre, A., 1991. On the examination of Grotta Guattari: Uranium series and electron spin resonance dates. *Current Anthropology* 32: 313-316. (B53)

Stringer, C.B., Grün, R., 1991. Time for the last Neanderthals. *Nature* 351: 701-702. (B54)

### 1992

Balescu, S., Packman, S.C., Wintle, A.G., Grün, R., 1992. Thermoluminescence dating of the middle Pleistocene beach of Sangatte (northern France). *Quaternary Research* 37: 390-396. (B55)

Grün, R., 1992. Remarks on ESR dating of fault movements. *Journal of the Geological Society of London* 149: 261-264. (B56)

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**CONTRIBUTIONS AT INTERNATIONAL CONFERENCES**

**Organiser**

- 1<sup>st</sup> ANZ Meeting on Quaternary Dating. 8-10 February 1993, Canberra, Australia.  
 2<sup>nd</sup> ANZ Meeting on Quaternary Dating. 1-3 February 1995, Canberra, Australia.  
 8<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 22-26 April 1996, Canberra, Australia (Chair of the Organising Committee).  
 Workshop on Marine Geochemistry and Ocean Modelling. ANU, 5 March 2004.  
 2004 Robertson Workshop on Environmental Geochemistry and Geochronology: Quaternary Geochronology. 30 April - 2 May 2004, Robertson.  
 Asia Pacific Conference on Human Evolution. 25-27 June 2019, Brisbane. Co-Chair of Organising Committee.

**Invited Speaker**

- Grün, R. *Present status of ESR dating*. 2<sup>nd</sup> International Symposium on ESR Dosimetry and Applications, 10-13 October 1988, München, Germany (**Abstracts: p. 77**). (E1)  
 Grün, R. *Electron Spin Resonance (ESR) Dating*. Nordic Symposium on Physics - Geophysics - Geology, 24/6-1/7 1989, Skalholt, Iceland (**Abstracts: pp 16-20**). (E2)  
 Grün, R. *Contribution of ESR dating to the reconstruction of modern human evolution*. International Symposium on Archaeometry, 1-6 April, 1990, Heidelberg (**Abstract 82**). (E3)  
 Grün, R. *Potential and problems of ESR dating*. 6<sup>th</sup> International Specialist Seminar on Thermoluminescence and Electron Spin Resonance Dating, 2-6 July 1990, Clermont-Ferrand, France (**Abstract 13**). (E4)  
 Grün, R. *ESR dates of tooth enamel from French Mousterian sites*. Colloque International: Les Mousteriens Charentiens, 26-29 August 1990, Brive -La Chapelle-aux-Saints, France (**Abstracts: p. 46**). (E5)  
 Grün, R. *Electron spin resonance (ESR) dating*. Dateringsmethoden in de Kwartairgeologie en Archeologie. February 13, 1991, Amsterdam. (E6)  
 Grün, R. *The significance of ESR as a Quaternary dating technique*. 4<sup>th</sup> International Symposium on ESR Dosimetry and Applications, 15-19 May 1995, München, Germany (**Abstracts: p. 36**) (E7)  
 Grün, R. *Towards non-destructive ESR dating of tooth enamel*. International Symposium on New Prospects of ESR Dosimetry and Dating. 25-27 October 2001, Osaka, Japan (**Abstracts: p. 6**) (E8)  
 Grün, R. *ESR Dating Applications in Archaeology and Earth Sciences*. 3<sup>rd</sup> Asia-Pacific EPR/ESR Symposium. 29 October - 1 November 2001, Kobe, Japan (**Abstracts: p. 12**) (E9)  
 Grün, R. *Dating modern human evolution*. European Geophysical Society, 22-26 April 2002, Nice, France, Session ERE3: Abrupt climatic fluctuations: a context for hominid and human development (**Abstract EGS02-A-02075**) (E10)  
 Grün, R. *Direct dating of hominids using ESR and U-series dating*. Palaeontological and Archaeological Insights into Human Evolution. 2-3 June 2002, Leipzig, Germany (**Abstracts, p. 2**). (E11)  
 Grün, R. *Dating of modern human evolution*. 3<sup>rd</sup> KBSI Symposium on Age Determination, 25 September 2002, Daejeon, Korea (**Proceedings: p. 42-74**). (E12)  
 Grün, R. *Physical dating methods in archaeology*. Archéométrie 2003, 16-19 April 2003, Bordeaux, France. (E13)  
 Grün, R. *Introduction to Quaternary geochronology*. 12<sup>th</sup> Workshop on Applied Metrology, 13-14 September 2003, Okayama, Japan (**Proceedings: p.20-33**). (E14)  
 Grün, R. Eggins, S., Aubert, M. *Advances in ESR dating*. XVII INQUA Congress, 28 July - 3 August 2007, Cairns, Australia (**Abstract 1064, Quaternary International 167-168: 148-149**). (E15)  
 Grün, R., Aubert, M., Pike, A., Duval, M. *The challenge of dating old human fossils*. Les premières expansions humaines en Eurasie à partir de l'Afrique Facteurs limitant ou favorisant. Colloque international organisé au Muséum National d'Histoire Naturelle, Paris 26-28 November 2008 (**Abstracts: p. 59**). (E16)  
 Grün, R., Tani, A., Gurbanov, D., Williams, I., Braun, J. *Reconstruction of cooling and denudation rates of the Eldzhurtinskiy Granite, Caucasus, using paramagnetic centres in quartz*. 2<sup>nd</sup> Asia-Pacific Meeting on Luminescence and ESR Dating. 12-15 November 2009, Ahmedabad, India (**Abstracts: p. 38**). (E17)  
 Grün R., Kinsley L., Moseley H. Sambridge M. *Uranium series analysis of fossil bones and teeth*. 7<sup>th</sup> International Bone Diagenesis Meeting 22-25 October 2013 Lyon, France (**Abstracts: p. 24**). (E18)

- Grün R., Kinsley L., Eggins S. *Maps of elemental distributions in modern and fossil human teeth. teeth.* 7<sup>th</sup> International Bone Diagenesis Meeting 22-25 October 2013 Lyon, France (**Abstracts: p. 25**). (E19)
- Grün, R. *U-series analysis of human fossils. Les hominids du Pliocène et du Pléistocène inférieur et moyen dans le monde. La place de l'Homme de Tautavel. Un Homo heidelbergensis, il y a 450,000 ans.* Centre Européen de Recherches Préhistoriques de Tautavel. 23-27 June 2014. (E20)
- Grün, R. *A personal, 35 year long journey in ESR dating.* 5th Asia Pacific Conference on Luminescence and Electron Spin Resonance Dating, 15-17 October 2018, Beijing, China. (E21)
- Grün, R. *The chronology of human evolution in Southeast Asia for the last 500,000 years.* 5th Annual Symposium on Maritime Connections. 12-14 December 2019, Tübingen (**Abstracts: p. 11**). (E22)
- Grün, R. *Chronology of Callao Cave.* International Conference on Homo luzonensis and the hominin record of southeast Asia. 3-4 February 2020, Quezon City, Philippines (**Abstracts: p. 12**). (E23)

### **Papers presented**

- Grün, R., Brunnacker, K. & Hennig, G.J. *Paleoclimatic Indications Given by Speleothems, Spring Deposited Travertines, and Marine Terraces.* International Union of Geodesy and Geophysics (IUGG), XVIII General Assembly, 15-27 Aug. 1983, Hamburg (**Abstract 5/4**). (F1)
- Grün, R., Brunnacker, K. & Hennig, G.J. *Paleoclimatic Indications Given by Speleothems, Spring Deposited Travertines, and Marine Terraces.* Exkursionstagung der Subkommission für Europäische Quartärstratigraphie, 11-20 Sept. 1983, München. (F2)
- Grün, R. *ESR-dating: Interferences affecting the determination of the naturally accumulated dose (AD) of secondary calcites.* 1984 Symposium on Archaeometry, 14-18 May 1984, Washington D.C. (**Abstracts: p. 51**). (F3)
- Grün, R. & Invernati, C. *ESR dating: A detailed study of a mammoth tooth.* 4<sup>th</sup> International Seminar on TL and ESR Dating, 24-28 Sept. 1984, Worms (**Abstract 34**). (F4)
- Grün, R. *ESR-dating without determination of annual dose: a first application on dating mollusc shells.* 1<sup>st</sup> International Symposium on ESR Dating, 1-4 Sept. 1985, Ube - Japan (**Abstract 2-4**). (F5)
- Grün, R. *ESR dating speleothem records: limits of the method.* 1<sup>st</sup> International Symposium on ESR Dating, 1-4 Sept. 1985, Ube - Japan (**Abstract 1-5**). (F6)
- Grün, R. *Paleoclimatic inferences from ESR dating of speleothem profiles in Germany and Spain.* Symposium on the climatic fluctuations during the Quaternary in the western Mediterranean regions, 14-21 April 1986, Madrid. (F7)
- Grün, R. *ESR dating speleothems.* 9<sup>th</sup> International Speleological Congress, 1-7 August 1986, Barcelona (**Proceedings: p. 308**). (F8)
- Grün, R. & Schwarcz, H.P. *ESR dating of Quaternary deposits.* 99<sup>th</sup> Annual Meeting and Exposition, Geol. Soc. America, 10-13 Nov. 1986, San Antonio, Texas (**Abstract 95843, p. 622**). (F9)
- Grün, R. *The potential of ESR dating tooth enamel.* Coll. Int. L'Homme de Neanderthal, 4-7 Dec. 1986, Liege, Belgium (**Abstracts: p. 19**). (F10)
- Grün, R. & Hentzsch, B. *Problems encountered in ESR dating of spring deposited travertines.* 5<sup>th</sup> Specialist Seminar on TL and ESR Dating, 6-10 July 1987, Cambridge, UK (**Abstract 92**). (F11)
- Grün, R. & Schwarcz, H.P. *U disequilibrium, U uptake, and ESR dating of teeth.* 5<sup>th</sup> Specialist Seminar on TL and ESR Dating, 6-10 July 1987, Cambridge, UK (**Abstract 63**). (F12)
- Grün, R. *The potential of ESR dating in Quaternary geology.* XII International Congress of the International Union for Quaternary Research (INQUA), 31 July - 9 August, 1987, Ottawa, Canada (**Abstracts: p. 178**). (F13)
- Grün, R. & MacDonald, P.D.M. *Non-linear fitting of TL/ESR dose response curves.* 2<sup>nd</sup> International Symposium on ESR Dosimetry and Applications, 10-13 October 1988, München, Germany (**Abstracts: p. 81**). (F14)
- Grün, R. & Packman, S.C. *Problems involved in the dating of cover sands using K-feldspars.* Seminar on Long and Short Range Limits in Luminescence Dating, 11-13 April 1989, Oxford (**Abstracts: p. 6**). (F15)
- Grün, R. *ESR-U-series comparisons, reefs II to IV.* International Workshop on Quaternary Sealevel Change, 15-21 March, 1990, Kikai, Japan. (F16)

- Grün, R. & Radtke, U. *Results of a dating intercomparison project on corals*. 6<sup>th</sup> International Specialist Seminar on Thermoluminescence and Electron Spin Resonance Dating, 2-6 July 1990, Clermont-Ferrand, France (**Abstract 15**). (F17)
- Packman, S.C. & Grün, R. *TL analysis of loess samples from Achenheim*. 6<sup>th</sup> International Specialist Seminar on Thermoluminescence and Electron Spin Resonance Dating, 2-6 July 1990, Clermont-Ferrand, France (**Abstract 120**). (F18)
- Grün, R. & Fenton, C. *An ESR study of fault gouge from Holocene fault systems in Scotland*. 6<sup>th</sup> International Symposium Seminar on Thermoluminescence and Electron Spin Resonance Dating, 2-6 July 1990, Clermont-Ferrand, France (**Abstract 129**). (F19)
- Grün, R. *ESR dating of fault gouge*. Absolute Dating of Fault Movements, 28 November 1990, Geological Society, London. (F20)
- Grün, R. & Stringer, C.B. *ESR dating and the evolution of modern humans*. Joint Meeting of the Royal Society and British Academy on "New Developments in Archaeological Science", 13-14 February 1991, London. (F21)
- Grün, R. *Contribution of ESR dating to the reconstruction of modern human evolution*. XIII INQUA Congress, 2-9 August 1991, Beijing, China (**Abstracts: p. 121**). (F22)
- Grün, R. & Rhodes, E.J. *ESR and TL/OSL dating: background and recommendations for sample collection*. XIII INQUA Congress, 2-9 August 1991, Beijing, China. (F23)
- Grün, R. & Rhodes, E.J. *Monte Carlo Simulations of non-linear ESR/TL dose response curves*. 3<sup>rd</sup> International Symposium of ESR Dosimetry and Applications, 14-18 October 1991, Gaithersburg, U.S.A. (**Abstracts: p. 4**). (F24)
- Grün, R., McDermott, F., Stringer, C.B. & Hawkesworth, C.J. *Open System modelling for U-series and ESR dating of teeth*. 1<sup>st</sup> ANZ Meeting on Quaternary Dating. 8-10 February 1993, Canberra, Australia (**Abstracts: p.7**). (F25)
- Grün, R. *The kinetics of TL peaks and its effect on the dose versus temperature plot*. 7<sup>th</sup> International Specialist Seminar on Thermoluminescence and Electron Spin Resonance Dating, 5-9 July 1993, Krems, Austria (**Abstract 1-5**). (F26)
- Grün, R. & Brumby, S. *Extrapolation of ESR/TL dose response data by single exponential saturating functions and assessment of the error involved in the determination of the past radiation dose*. 7<sup>th</sup> International Specialist Seminar on Thermoluminescence and Electron Spin Resonance Dating, 5-9 July 1993, Krems, Austria (**Abstract 1-8**). (F27)
- Grün, R. & Packman, S.C. *Observations on the kinetics involved in the TL glow curves in quartz, K-feldspar and Na-feldspar mineral separates of sediments and their significance for dating studies*. 7<sup>th</sup> International Specialist Seminar on Thermoluminescence and Electron Spin Resonance Dating, 5-9 July 1993, Krems, Austria (**Abstract 1-9**). (F28)
- Grün, R., Rink, W.J. & Smalley, P.C. *ESR analysis of the E= Centre in quartz grains and quartz cement of sandstones*. 7<sup>th</sup> International Specialist Seminar on Thermoluminescence and Electron Spin Resonance Dating, 5-9 July 1993, Krems, Austria (**Abstract 7-30**). (F29)
- Grün, R., Head, M., Abeyratne, M. & Tuniz, C. *AMS analysis of teeth from archaeological sites showing anomalous ESR dating results*. 15<sup>th</sup> International Radiocarbon Conference, 15-19 August 1994, Glasgow, Scotland (**Abstract D-16**). (F30)
- Grün, R. *The problem of dating hominid remains illustrated with the Florisbad site*. 2<sup>nd</sup> ANZ Meeting on Quaternary Dating. 1-3 February 1995, Canberra, Australia (**Abstracts: p. 39**). (F31)
- Grün, R. & Jonas, M. *Plateau tests and spectrum de-convolution for ESR dose determination*. 4<sup>th</sup> International Symposium on ESR Dosimetry and Applications, 15-19 May 1995, München, Germany (**Abstracts: p. 149**). (F32)
- Huang, P.H. & Grün, R. *ESR dating of Chinese palaeoanthropological sites*. 4<sup>th</sup> International Symposium on ESR Dosimetry and Applications, 15-19 May 1995, München, Germany (**Abstracts: p. 150**). (F33)
- Brink, J.S., Grün, R. & Henderson, Z. *Progress report on the Florisbad dating project*. 10<sup>th</sup> Congress of the Pan African Association for Prehistory and Related Studies. 18-23 June 1995, Harare, Zimbabwe (**Abstracts: p. 1**). (F34)



- Grün, R. *ESR dating of palaeoanthropological sites*. 10<sup>th</sup> Congress of the Pan African Association for Prehistory and Related Studies. 18-23 June 1995, Harare, Zimbabwe (**Abstracts: p. 1**). (F35)
- Grün, R. *The significance of ESR as a Quaternary dating method*. 11<sup>th</sup> Workshop on ESR Applied Metrology. 22-23 September 1995, Osaka, Japan (**Abstracts: p. 43**). (F36)
- Grün, R., Abeyratne, M., Head, J., Tuniz, C. *AMS analysis of teeth from archaeological sites showing anomalous ESR dating results*. 8<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 22-26 April 1996, Canberra, Australia (**Abstracts: p. 137-138**). (F37)
- Grün, R., Clapp, R. *An automated sample changer for Bruker ESR spectrometers*. 8<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 22-26 April 1996, Canberra, Australia (**Abstracts: p. 89**). (F38)
- Grün, R., Kohno, H., Tani, A., Yamanaka, C., Ikeya, M., Huang, P.H. *Pulsed ESR measurements on fossil teeth*. 8<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 22-26 April 1996, Canberra, Australia (**Abstracts: p. 53-54**). (F39)
- Grün, R., Tani, A., Gurbanov, A., Koshchug, D., Williams, I., Braun, J. *Reconstruction of cooling and denudation rates of the Eldzhurtinskiy Granite, Caucasus, using paramagnetic centres in quartz*. 9<sup>th</sup> International Conference on Geochronology, Cosmochronology and Isotope Geology, 21-26 August 1998, Beijing (**Abstracts: p. 48**). (F40)
- Grün, R. *Direct dating of fossil hominids*. 9<sup>th</sup> International Conference on Geochronology, Cosmochronology and Isotope Geology, 21-26 August 1998, Beijing. (F41)
- Grün, R. *Reconstruction of cooling and denudation rates of the Eldzhurtinskiy Granite, Caucasus, using paramagnetic centres in quartz*. 9<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 6-10 September 1999, Rome (**Abstracts: p. 34**). (F42)
- Grün, R. *Methods of dose determination using ESR spectra of tooth enamel*. 9<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 6-10 September 1999, Rome (**Abstracts: p. 161**). (F43)
- Robertson, S., Grün, R. *Dose determination on tooth fragments*. 9<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 6-10 September 1999, Rome (**Abstracts: p. 163**). (F44)
- Grün, R. *The place of luminescence dating in Quaternary Geochronology*. Professor Martin Aitken's 80<sup>th</sup> Birthday Celebration. 11-12 April 2002, Clermont Ferrand. (F45)
- Grün, R., Eggins, S., Shelley, M., Pike, A. *Laser ablation ICP-MS analysis for the determination of U-concentration profiles and in situ U-series dating*. 10<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating. 24-28 June 2002, Reno. (**Abstracts: p. 25**) (F46)
- Grün, R., and Eggins, S. *The age of the Border Cave 5 mandible*. International Quaternary Association, 23-30 July, 2003, Reno (**Abstract 50-8**) (F47)
- Grün, R., Beaumont, P., Tobias, P.V., Eggins, S. *The age of the Border Cave 5 mandible*. 13<sup>th</sup> Annual V.M. Goldschmidt Conference, 7-12 September 2003, Kurashiki, Japan (**Abstract A126**) (F48)
- Grün, R., Eggins, S., and Pike, A. *Progress in dating hominid remains*. Geoscience Africa 2004, 12-16 July 2004, Johannesburg (**Abstracts: p. 233**). (F49)
- Grün, R., Eggins, S., and Pike, A. *Progress in direct dating of human fossils*. 12<sup>th</sup> Congress of the Panafrican Archaeological Association for Prehistory and Related Studies. 3-10 July, 2005, Garborone, Botswana (**Abstracts p. 17**). (F50)
- Grün, R., Eggins, S., Wells, R.T., Rhodes, E., Spooner, N., and McCulloch, M. *A cautionary tale from down-under: dating the megafauna site of Rocky River on Kangaroo Island, South Australia*. 11<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 24-29 July 2005, Cologne, Germany (**Abstracts p. 75**). (F51)
- Grün, R. *ESR dating (fundamentals, techniques and applications)*. Workshop in conjunction with the 11<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 24-29 July 2005, Cologne, Germany. (F52)
- Grün, R., Aubert, M., Eggins, S., Williams, I., Moncel, M.H. *High-resolution in situ analysis of O and Sr isotopes in fossil human teeth. 150 years of Neanderthal discoveries. Early Europeans - continuity & discontinuity*. 21-26 July 2006, Bonn, Germany. (**Terra Nostra 2006/2: p. 115**) (F53)

- Grün, R. *The relevance of parametric U-uptake models in ESR age calculations*. 12<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating. 18-22 September 2008, Beijing, China (**Abstracts p. 63**). (F54)
- Grün, R., Mahat, R., Joannes-Boyau, R. *Ionization efficiencies of alanine dosimeters and tooth enamel irradiated by gamma and X-ray sources*. 13<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 9-14 July 2011, Torun, Poland (**Abstracts p. 73**). (F55)
- Grün, R., Eggins, S., Sambridge, M. *A new model for U-diffusion into skeletal tissues*. 3<sup>rd</sup> Asia-Pacific Conference on Luminescence and Electron Spin Resonance Dating. 18-22 November 2012, Okayama, Japan (**Abstracts p. 6**). (F56)
- Grün, R., Duval, M. *Spatial distribution of U, U-series isotopes and CO<sub>2</sub><sup>-</sup> radicals in tooth enamel*. 14<sup>th</sup> International Conference on Luminescence and Electron Spin Resonance Dating, 7-11 July 2014, Montreal, Canada (**Abstracts: p.64**) (F57)
- Grün, R., Duval, M., *Direct ESR dating of human fossils*. 5th Asia Pacific Conference on Luminescence and Electron Spin Resonance Dating, 15-17 October 2018, Beijing, China. (F58)
- Grün, R., Callao Team. *Dating of Callao Cave*. Asia Pacific Conference on Human Evolution. 25-27 June 2019, Brisbane (**Abstracts: p.39**). (F59)
- Grün, R., Duval, M., *Direct ESR dating of human fossils and the ever changing story of human evolution*. INQUA, 25-31 July 2019, Dublin (**Abstract O-4113**). (F60)
- Grün, R., Duval, M., *Direct ESR dating of human fossils and the ever changing story of human evolution*. Human Evolution 2019, 30 October - 1 November, Cambridge (**Abstract S35**). (F61)

### National Meetings

- Grün, R. *Electron spin resonance dating*. 19<sup>th</sup> Annual Meeting of the Canadian Archaeological Association, 24-27 April 1986, Toronto (**Abstracts: p. 17**). (G1)
- Grün, R. & Mellars, P. *ESR dating of Middle Palaeolithic sites in France*. Palaeolithic and Mesolithic Day Meeting, The British Museum, 24 November 1990, London. (G2)
- Grün, R. *ESR dating and modern human evolution*. Palaeolithic and Mesolithic Day Meeting. MacDonald Institute for Archaeological Research, Cambridge 25 May 1991. (G3)
- Grün, R. & Rhodes, E.J. *Monte Carlo Simulations of non-linear ESR/TL dose response curves*. UK Luminescence and ESR Dating Meeting. 24-25 September 1991, Aberystwyth (**Abstracts: p. 7**). (G4)
- Grün, R. *Electron Spin Resonance Dating*. Technical workshop on Quaternary Dating methods. 13-14 October 1994, AINSE-ANSTO, Lucas Heights (**Abstracts: p. 22-26**). (G5)
- Grün, R. & Curnoe, D. *Direct Dating of Hominids*. Annual Conference of the Australian Archaeological Association, 5-7 December 1996, Dzinari, Yankalilla, SA (**Abstracts: p. 12**). (G6)
- Grün, R. *Direct Dating of Hominids Using ESR and U-Series Dating*. 2nd Quaternary Dating Workshop, 8-9 April 1999, Lucas Heights, Sidney (**Abstracts: p.18**). (G7)
- Grün, R., Tani, A., Gurbanov, A., Koshchug, D., Williams, I., Braun, J. *Reconstruction of cooling and denudation rates of the Eldzhurtinskiy Granite, Caucasus, using paramagnetic centres in quartz*. 17<sup>th</sup> Swiss Tectonic Studies Group, 31 March - 1 April 2000, Zürich (**Abstracts: p. 40**). (G8)
- Grün, R. *Direct Dating of Hominids Using ESR and U-Series Dating*. 65<sup>th</sup> Annual Meeting of the Society of American Archaeology, 5-9 April 2000, Philadelphia, PA. (G9)
- Grün, R. *ESR dating of faunal remains from Megafauna sites in Australia*. Workshop on Faunal Extinction, 9 June 2000, Centre for Archaeological Research, Australian National University, Canberra. (G10)
- Grün, R. *ESR dating of megafauna remains*. CAVEPS, Lincoln, New Zealand, 2-7 December 2001 (**Abstracts, p. 21**). (G11)
- Grün, R. *Dating methods for the Quaternary*. 3<sup>rd</sup> KBSI Symposium on Age Determination, 25 September 2002, Daejeon, Korea (**Proceedings: p. 21-41**). (G12)
- Grün, R. *Direct dating of South African human fossils*. Southern African Society for Quaternary Research. XV Conference, 30 March - 2 April 2003, Johannesburg (**Abstracts p. 12**). (G13)

- Grün, R. *Direct dating of fossil hominids*. Archéométrie 2003, 16-19 April 2003, Bordeaux, France (**Abstracts p. 186**) (G14)
- Grün, R. *The role of ESR dating in the reconstruction of the chronology of modern human evolution*. 12<sup>th</sup> Workshop on Applied Metrology, 13-14 September 2003, Okayama, Japan (**Abstracts: p. 35**). (G15)
- Grün, R. *Introduction to Quaternary Geochronology*. 12<sup>th</sup> Workshop on Applied Metrology, 13-14 September 2003, Okayama, Japan (**Abstracts: p. 20**). (G16)
- Grün, R. *ESR dating*. AINSE 3<sup>rd</sup> Quaternary Dating Workshop. 1-2 October 2003, Lucas Heights (**Abstracts: p. 26**). (G17)
- Grün, R., Eggins, S., Pike, A. *Advances in ESR and U-series dating of human remains*. 2004 Robertson Workshop on Environmental Geochemistry and Geochronology: Quaternary Geochronology. 30 April - 2 May 2004, Robertson. (G18)
- Grün, R., Aubert, M., Joannes-Boyau, R., Moncel, M.H. *High resolution analysis of uranium and thorium concentration as well as U-series isotope distributions in a Neanderthal tooth from Payre using laser ablation ICP-MS*. ANU Archaeological Science Conference, 6-8 February 2008 (**Abstracts: p.13**). (G19)
- Grün, R. *Advances in ESR dating*. 4<sup>th</sup> AINSE Quaternary Dating Workshop. 26-27 March 2008, Lucas Heights (**Extended Abstracts: p. 22-33**). (G20)
- Grün, R. *Retrospective Dosimetry using Electron Spin Resonance (ESR/EPR)*. Workshop on Australian capability for biodosimetry assessment. 12 August 2008, Melbourne. (G21)
- Grün, R., Kinsley, L., Moseley, H., Sambridge, M. *Uranium series analysis of fossil bones and teeth. U-series Symposium 2014: the frontiers of U-series research*. 12-14 February 2014, Manly, Sydney (**Abstracts: P. 7**). (G22)

### SEMINARS

- Institut für Kernchemie, Universität zu Köln (1984)
- Geographisches Institut, Universität zu Köln (1984, 1996, 1998, 2000, 2006, 10 hr lecture course 2014)
- Research Laboratory for Archaeology and the History of Art, Oxford University (1984, 1988, 1990, 2000, 2001)
- Departamento de Paleontología, Universidad Complutense Madrid (1984)
- Laboratoire de Chimie Inorganique et Nucleaire, Université de Louvain (1984)
- Department of Geology, McMaster University, Hamilton (1985)
- Department of Earth Sciences, Yamaguchi University, Ube (1985)
- Collegium Archaeometricum, Toronto (1985)
- Subdepartment for Quaternary Research, University of Cambridge (1986)
- New York State University, Oneonta (1986)
- Dept. of Geography, Royal Holloway & Bedford New College (1987)
- Dept. of Earth Sciences, University of Cambridge (1988)
- Dept. of Archaeology, University of Stellenbosch (1988)
- Geological Survey of Denmark, Copenhagen (1988)
- Dept. of Archaeology, Haifa University (1989)
- Perlman Institute of Isotope Chemistry, Weizmann Institute of Science, Rehovot (1989)
- Dept. of Geology, Hebrew University, Jerusalem (1989)
- Geologisches Institut, Universität Bremen (Vorstellungskolloquium) (1990)
- Geologisk Institutt B (Kvartærgeologi), University of Bergen (1990)
- INRS-Géoresources, Université du Québec (1990)
- Institute for Vertebrate Palaeontology and Palaeoanthropology, Beijing (1991, 2019)
- Research School for Pacific Studies, ANU, Canberra (1991)
- Dept. of Physics, University of Adelaide (1992)
- Dept. of Geography, University of Wollongong (1992)
- Dept. of Archaeology, University of Colombo, Sri Lanka (1993)
- BPI for Palaeontological Research, University of the Witwatersrand, Johannesburg (1993)

Dept. of Zoology and Entomology, University of the Orange Free State, Bloemfontein (1993)  
 Dept. of Archaeology, University of Cape Town (1993)  
 Institute for Structural Research, University of Science and Technology of China, Hefei (4 lectures, 1993)  
 Laboratory for Loess and Quaternary Geology, Xian, China (1993)  
 Dept. of Geology, La Trobe University, Melbourne (1993, 1998)  
 Dept. of Quantum Geophysics, University of Osaka (1994)  
 Dept. of Chemistry, University of Niigata (1994)  
 Research School of Earth Sciences, ANU, Canberra (1995, 1998, 1999, 2013)  
 Dept. of Physics, University of Hokkaido, Hakodate (1995)  
 Dept. of Physics, University of Gent (1995, 2002)  
 Dept. of Mineralogy, Moscow State University (1995)  
 Korea Institute of Geology, Mining and Materials, Taejon (2 lectures, 1997)  
 Yunnan Cultural Relics and Archaeology Institute, Kunming (1997)  
 Dept. of Earth and Space Sciences, University of Osaka (1997)  
 Dept. of Physics, University of Guelph (1997)  
 Mathematisch-Naturwissenschaftliche Fakultät der Universität zu Köln (1997)  
 Dept. of Anatomy, University College of London (1998)  
 Geologisches Institut der Universität zu Köln, Antrittsvorlesung (1998)  
 Sächsische Akademie der Wissenschaften, Freiberg (1999)  
 Institut für Geophysik and Geologie, Universität Leipzig (1999)  
 Department of Geography, University of Aberdeen (1999)  
 Centre for Archaeological Research, ANU (1999, 2004, 2013)  
 School of Biological Sciences, Flinders University (2000)  
 National Museum, Bloemfontein (2001)  
 Institut für Geochemie, Mineralogie und Lagerstättenkunde, Universität Frankfurt (2001)  
 Medical School, University College of London (2001)  
 Dept. of Geography, University of Oxford (2001)  
 Dept. of Archaeology, University of Bristol (2001)  
 Laboratorium voor Prehistorie, Universiteit Leuven (2002)  
 Dept. of Anatomy, University of the Witwatersrand, Johannesburg (2002)  
 Korean Institute for Nuclear Safety, Daejeon (2002)  
 Department of Archaeology, University of Girona (2003, 2004)  
 Department of Archaeological Sciences, University of Bradford (2004)  
 Geological Society of Australia (2004)  
 Institute de Préhistoire Humaine, Paris (2005)  
 Musée de Préhistoire, Tautavel (2005)  
 CNRS-CEA, Gif sur Yvette (2005)  
 Département de Préhistoire du Muséum National d'Histoire Naturelle, Paris (2 in 2006, 2008, 2009, 2012, 2 in 2015)  
 Laboratoire d'Anthropologie des populations du Passé, Université Bordeaux 1 (2006, 2009, 2013)  
 Dept. of Archaeology, University of Princetown, Marillac Field-School (2006)  
 Canberra Archaeological Society (2007)  
 Dept. of Archaeology, La Trobe University (2008)  
 Dept of Geography, Peking University (2 in 2009, 2010, 2018)  
 Institute of Geology, China Earthquake Administration, Beijing (2 in 2009, 10 in 2010)  
 Research School of Biological Sciences, ANU (2010)  
 John Curtin School of Medical Research, ANU (2010)  
 Centro Nacional de Investigación sobre la Evolución Humana, Burgos (2010, 2014)  
 Department of Geology, National Museum of Natural Science, Taichung, Taiwan (2012)  
 CAS Key Lab of Salt Lake Resources, Xining (12 hr lecture series, 3 research seminars 2012)  
 CAS Cold and Arid Region Environmental and Engineering Research Institute, Lanzhou (2 in 2012)  
 School of Geology, Lanzhou University (2012)

Department of Earth Sciences, University of Hong Kong (2012)  
Dipartimento di Scienze Chimiche e Geologiche, Università degli Studi di Cagliari, Italy (2012)  
Department of Geography, Qinghai University, Xining (2012)  
Department of Earth and Planetary Sciences, University of Tokyo (2012)  
Department of Earth Sciences, Natural History Museum, London (2013)  
Archaeometry Laboratory, University of Science and Technology of China, Hefei (2014)  
Nanjing Normal University, China (2014)  
Nanjing University, China (2014)  
Department of Geosciences, University of Cologne (2014)  
Sonderforschungsbereich 806, University of Cologne (2014)  
Environmental Futures Research Institute, Griffith University (2015)  
Department of Geology, University of Queensland (2016)  
Department of Archaeology, University of Queensland (2016)  
Department of Earth Sciences, James Cook University, Townsville (2016)  
Department of Archaeology, University of Oxford (2018)  
Institute of Geology and Geophysics, Chinese Academy of Science, Beijing (2019)  
Tibetan Plateau Research Institute, Chinese Academy of Science, Beijing (2019)  
DFG Centre of Advanced Studies, University of Tübingen (2019)  
Institute for Earth Surface Dynamics, University of Lausanne (2 in 2019)